THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

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THE CULTIVATOR

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☞ ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion

THE CULTIVATOR.

MONTHLY NOTICES.

COMMUNICATIONS have been received since our last, from Wm. Fuller, W. R. Gilkey, Long Island, A. L. Fish, Prudence Reynolds, Jonathan, L. A. Morrell, Wm. Jarvis, S. Weller, A Subscriber, Arabella Sheldrick, H. P. & G. Allen, John Johnston, D. S. Curtis, H. Meigs, L. D. Gregory, S. W. Jewett, G. Butler, M., G. L. Beckwith, P. H. P., A Wool Grower, C. H. Hall, A. L. Kennedy, G. F. Baltzell, S. Wagner, Frock and Trowsers, J. W. Salter, L. Peterson, A. R. D., R. L. Pell, C. H. Tomlinson, James Wiley, R. M., James Camak, A Subscriber, J. J. T., S. N. Haines.

We are under obligations to P. L. SIMMONDS, Esq., London, for copies of the first and second numbers of his "*Colonial Magazine;*" also for Richardson's "Geology for Beginners," and several pamphlets.

To some unknown friend, for the Transactions of the Westboro (Mass.) Ag. Society for 1843, embracing the Address of the Rev. Mr. Kittridge, Reports of Committees, &c.

To H. L. ELLSWORTH, Esq. Commissioner Patent Office, Washington, for a number of parcels of seeds, among which are the Multicole Rye from France—five varieties of Wheat—three of Indian Corn—three of Melons—two of Peas—one of Beets—two of Cabbages, Calcutta Flax, Egyptian Corn, &c.

To E. P. LANGDON, Esq. for the Annual Report of the Trustees and Visitors of the Common Schools of Cincinnati. The Common Schools of the Queen city, are models worthy of imitation.

SEABROOK'S MEMOIR ON THE ORIGIN, CULTIVATION, AND USES OF COTTON.—This is a pamphlet of 62 pages, by W. B. Seabrook, Esq. President of the State Agricultural Society of South Carolina. From the little attention we have been able to give, we should think this a valuable memoir. Our thanks are due to the author for a copy.

We have received an excellent article on "Wool and Sheep Husbandry, by a member of the New-Castle Co. (Del.) Practical Farmer's Club," from which we should be pleased to give such extracts as the state of our columns will admit, in some future number.

Col. NEISWANGER, of St. Clairsville, Ohio, will accept our thanks for a copy of Dr. RICHARDSON'S Address, delivered before the Agricultural Societies of Brooke and Ohio counties, Virginia.

HON. JAMES BATES, of Norridgewock, will please accept our thanks for a copy of his address delivered before the Somerset (Me.) Agricultural Society. It is a *real* good practical address, and did space permit, we should like to give some extracts from it in the Cultivator.

STATE FAIR FOR 1845.—The New Genesee Farmer, in announcing that the next Fair of the State Ag. Society was to be held at Poughkeepsie, stated that the arrangement, as it was informed, was made "with the understanding that it is to be at Buffalo the year following." To several inquiries as to the correctness of this statement, we answer that nothing was said at the annual meeting in relation to the place of holding the Fair for 1845, nor did we hear of any discussion or any "under

standing" on the subject, among the officers or members of the Society.

STATE FAIR AT POUGHKEEPSIE.—Great preparations are making in Dutchess and the river counties for this Fair, which it is thought will far exceed any previous one of the Society. A meeting was recently held at Poughkeepsie on the subject, at which the right spirit was manifested, and a committee of fifteen appointed to co-operate with the officers of the State Society, in making the necessary arrangements, raising funds, &c.

VARIETIES OF WHEAT.—We would call attention to some samples of wheat at the Agricultural Society's room, (old State Hall,) from Gen. HARMON, of Wheatland, Monroe co., N. Y. The samples embrace twelve or fourteen varieties, which Gen. H. has tested on his own farm. His opinion of their relative value, may be seen by an article from him on the cultivation of wheat, which will appear in the third volume of the Transactions of the N. Y. State Ag. Society, which is now in the course of publication.

S. M.—The 4th part of Johnston's Lectures, has not, we believe, been published.

BERMUDA GRASS.—Will our friend Mr. Affleck, have the goodness to answer the following inquiries. Would either Bermuda or Musqueto grass suit the climate of Albany? Where could the seed of either of these grasses be had, and at what prices?

PIGEON WEED.—Mr. J. Johnston, says he is much troubled with this weed, or *red root*, as sometimes called, and requests information as to the best mode of extirpating it. Who can tell the best way to do it?

WIRE WORM.—"A Subscriber" at Norwich, Mass., inquires for a remedy against the ravages of the *wire worm*. We do not know that any specific has been discovered; their mode of attack is such that it is difficult effectually to guard against them. They destroy the germ of seed grain, and sometimes much injure potatoes by working into them. Soaking grain in a solution of copperas, before sowing or planting, is the best preventive that has yet been used; but it is doubtful whether this is in all cases sufficient.

TRANSFERRING BEES.—The Boston Cultivator wishes to learn the mode of transferring bees, which is referred to by Mr. J. WELLS, of Ulster, N. Y., in his communication published in the Cultivator, vol. 10, page 178. Mr. W. calls it "Kelsey's mode." He will oblige us by sending a description of it.

FAT CATTLE.—Three oxen raised by Jeremiah Brown, Ridgeway, Orleans co. N. Y., one of which took the first premium of the New-York State Ag. Soc. at Rochester, last fall, were lately sold in Boston market. Their dressed weight was 1,950 lbs., 2,500 lbs., 2,630 lbs. A roasting piece of one of them was sent to this city as a sample, and was admitted to exceed any thing of the kind before seen.

SELECTION OF STOCK.—"Jo Sykes," a correspondent of the N. Y. Commercial Advertiser, says that while on a visit to Mr. Webster's farm at Marshfield, in Dec. last, Mr. W. made the following remarks: "In the selection of stock, farmers in this country should regard their own climate and their own circumstances, and note wherein they differ from those of the farmers in England. Here we raise oxen for work as well as beef; but there they seldom raise cattle for working."

SOAKING CORN IN MURIATE OF AMMONIA.—Dr. Samuel Webber gives an account in the N. E. Farmer, of several experiments which he made last season with muriate of ammonia. He dissolved a small piece of the common sal ammoniac of the druggists, estimated at 4 or 5 grains, in about half a coffee-cup of water, and threw into the solution a handful of corn, which, after having remained 4 to 5 hours, was planted. He planted this soaked corn in hills, side by side with that which was not soaked. He made four different experiments, which are reported in considerable detail. In all cases, the soaked seed produced considerably the best yield—generally at least one-third more. The land was light and dry, and for several of the experiments, he purposely took the poorer spots. The corn suffered with drouth; but in all cases, that from the soaked seed manifested a decided superiority; so much indeed, that it was noticed by strangers, who knew of no difference in the seed.

MERINO SHEEP.—We would invite particular attention to the very interesting letter in this paper, from the Hon. WM. JARVIS of Vermont, giving a history of the introduction of the Merino into this country, and a description of the several varieties. Of the large number brought into the country in 1809, 10 and 11, it is doubtful whether a single flock, save that of Mr. Jarvis. has been preserved pure to the present time. In a tour through Vermont the last season, we saw many superior flocks of Merinoes, and in every instance we found their superiority was derived from bucks either obtained or descended from Mr. Jarvis' flock. We believe also that it will be found that the sheep so frequently alluded to in the Cultivator, as Paulars, derive their excellence from the same source. It will be seen from Mr. J.'s statement, that in the year 1816 or 1817, he permitted his five varieties of Merinoes to run together, and consequently that he has bred no pure Paulars for the last 25 years. If, as we suppose, the flocks of Messrs. Jewett, Avery, Bingham and others, owe their excellence to bucks obtained from Mr. Jarvis, within the last 20 years, there would seem to be a manifest impropriety in denominating them pure Paulars, however superior they may be, as they must have originated in a mixture of different varieties of Merinoes. It is possible however, that there may have been other importations of Paulars than those alluded to by Mr. Jarvis; and if so, we shall be glad to learn the facts in the case. There was, we believe, an importation of Merinoes into Massachusetts, not alluded to by Mr. Jarvis, made by Mr. SETH ADAMS, now a resident of Zanesville, Ohio; and as it is desirable that the history of their introduction should be as perfect as possible, we shall take measures to procure from Mr. A. an account of his importation.

NOTE.—In publishing Mr. Jarvis' letter, we omitted the paragraph alluding to the "Albany Agricultural paper," inasmuch as he had informed us that he had ascertained that the article was not from the Cultivator. Since the pages containing it were stereotyped, we have received a letter from Mr. JARVIS, in which he informs us that he has ascertained that the article alluded to was from the American Agriculturist, and originally appeared in the number of that paper for Sept. last.

BURYING CORN TO AVOID FROST.—Mr. S. Ellis states in the Massachusetts Plowman, an experiment made in 1842, of protecting corn from frost by covering it up with dirt. Being convinced from the state of the air, that there would be frost, he went into the field with his hands and covered about an acre, by hauling dirt on to it with hoes. As the next day was cold, he did not uncover the corn till the second day. On removing the dirt, the corn was found much crippled down, and looked, he says, "as if it had lain in bed with its clothes on for two nights;" but straightened up in the course of the day, and made as good a crop as he ever raised. The rest of the field was all killed.

THE Plymouth Co. (Mass.) Agricultural Society offers premiums for the best conducted experiments on different subjects. For instance, such as will determine the relative value of the various substances used as manure—as lime, salt, &c. Particular directions are given, which the claimant for a premium must strictly observe. For the experiment with salt, it is directed to take one-fourth part of an acre of dry land. Prepare two compost heaps—an equal quantity of manure in each—in one heap mix one bushel of salt, and in the other, the same kind of manure and no salt. Put one heap on one-half the lot, the other heap on the other half. Plant one-half of *each part* to corn, the other half of each part to potatoes. The next year sow grain and grass seed, and on the part on which salt was used the year before, sow half a bushel of salt, and sow the same quantity of salt the *third* year in the spring. Keep the crops separate, and weigh and keep an exact account of the product of each part.

Now something of this kind is what we want to see adopted by the New-York State Ag. Society, and we verily believe that a given sum thus expended, would effect more good than ten times the expense in any other way.

CONDENSED CORRESPONDENCE.

ROTATION OF CROPS.—Mr. Benj. H. Hart of Dutchess county, informs us that he practices the following course with success: first year, corn and roots—the second, oats with clover seed, and to remain two years in clover; the first crop cut for hay, the second, the seed stripped off, leaving the grass to be partly eaten off by wethers, which are procured in October, fattened on clover hay and turneps, and sent to market by the first of March, leaving a moderate stock on hand through the summer.

REMARKABLE HEIFER.—Mr. W. R. GILKEY, of Windsor, Vt., has sent us a statement of the quantity of butter made from a young cow of his. She produced her second calf May 6th, 1843—being three years old on the 4th of March previous. As Mr. G. had but one cow, his family were supplied with milk from this one—they using one and a half quarts per day. On the 26th of May, he churned the cream from eight days milk, which produced *twelve pounds* and *eleven ounces* of butter. The heifer was fed during this time with nothing but grass. She is one-fourth Durham blood, her other blood unknown.

LARGE CROP OF HAY.—Mr. M. Y. TILDEN, of New Lebanon, N. Y., writes us that he cut the past year, from 132 acres, 285 tons of well cured hay. Mr. T. says, "our sheep ranges being all on the mountain, we are compelled to bring them home early in the fall to pasture on the meadows, and the same cause operates in the spring; so that our mowing grounds are fed both spring and fall." He states that not more than ten acres of the land where the hay grew, was manured at all, excepting from the sheep as they grazed over it. This statement furnishes a fine comment on the notion that has worked into the heads of some men, that "*sheep poison meadow grounds.*"

A CURIOSITY.—A correspondent at Philadelphia, says: "Among the agricultural curiosities about here, an ox has just passed my house, which is eleven feet long from the shoulder to the tail, and over eighteen hands high! He is of the droop-horn breed from Kentucky, but has for several years been fed at the farm of Isaac W. Roberts, near this city." The ox is probably of the variety of long-horns, known in Kentucky as the Patton breed. They sometimes grow to an immense size.

MACHINE FOR CUTTING CORN-STALKS.—We have received from Mr. A. L. FISH, of Cedarville, N. Y., a description and drawing of a machine for cutting corn-stalks. We have no doubt the machine is a useful one, but our engagements prohibit an insertion of the drawing in the Cultivator at present. He states that the whole cost of the machine would not be more than two or three dollars. The cutting part is a knife, which he says may be made of an old scythe, fastened to a wheel, which is kept in motion by the foot, in the same manner as turning lathes are sometimes worked.

REMARKABLE PIG.—Mr. G. B. GREEN, of Windsor, Vt., killed a pig Jan. 1, 1844, nine months and one week old, that weighed *three hundred and sixty pounds*. Blood, one-quarter Berkshire, three-quarters Grass breed. This pig had been fed on slops and rye meal, till during the last three months—then with Indian meal and two tea cups full of molasses per day. From experiments, Mr. Green believes that a gallon of molasses, given in due proportions with other food, will put on more beef or pork, than two bushels of corn.

COMMON SCHOOLS.—Mr. Geo. L. Beckwith, of West Henrietta, Monroe co., N. Y., informs us that much good has been done in his neighborhood, by weekly meetings, which have been called in the several school districts, at which lectures on various subjects, have been delivered by school teachers and others. The practice is a good one, and might be advantageously adopted by others. Mr. B. also asks—"Why cannot a part of that rich store of minerals which the State has at so much expense collected, be distributed to the different counties, if they will provide a suitable place for them?"

BLIND TEETH IN MAN.—Mr. J. M. JOHNSON of Missouri, writing to us on the subject of blind teeth in horses, relates the following case of similar teeth having made their appearance in a human subject. Mr. J. says, "last winter I had a young man at work for me, whose eyes became weak; so much so, that during cold weather he was sometimes nearly blind. Not suspecting the cause, I used various remedies without success, until it occurred to me that it might be blind teeth. Upon examination, it was found that one had protruded about a fourth of an inch nearly in the roof of the mouth, and another scarcely developed through the skin. They were easily extracted, and the eyes soon became perfectly well."

CLOVER HULLING MACHINES.—Mr. Benj. H. Hart informs us that he has two kinds of clover hulling machines. One is on the plan of Mr. L'Hommedieu, described in a former number of the Cultivator, the other is merely a concave and cylinder attached to a one-horse power. Both perform well. The former can be made by any mechanic, and the latter can be had of A. Wheeler & Brothers, Chatham 4 Corners, Columbia co., N. Y. Price, $20. The Messrs. W. have also for sale, 'hreshing and other machines, made in the most approved manner.

SOAKING SEED CORN.—A correspondent who signs himself K., of Queens County, N. Y., writes us that seed corn is sometimes injured by being soaked too much. He soaked some corn about 36 hours in a solution of saltpetre, and then gave it a coating of tar; the consequence was, that only one or two grains sprouted in a hill, where five were planted. He supposes the corn had too much swelled before the tar was applied. This may have been the case, but we have known the germ *killed* by remaining too long in the saltpetre. If the sprout protrudes while the grain remains in the solution, it is very likely to be injured, especially if the liquid be strong. Solutions of potash, lime, &c., will operate in the same way.

MR. PELL'S ORCHARD.—Mr. MEIGS, Secretary of the N. Y. Farmes's Club, makes the following corrections of the report of his remarks on this subject, a brief abstract of which was given in our Feb. number, p. 46. Instead of "20,000 apple trees in full bearing," it should have been "in bearing, being 18 years old." "Mr. Pell's trees are planted 19, 20 and 25 feet apart—19 feet apart would allow 121 trees per acre. The object in thus planting, was to obtain fruit 10 or 12 years after they came into bearing—as fruit from young trees is usually found to be of superior quality. When they interfere with each other, the centre tree will be cut out, and they will then be 38, 40 and 50 feet apart." Instead of reading "that he employed a man to graft 10,000 apple trees," &c., it should have been "400 apple trees, being 18 years old, in which trees 10,000 grafts were set, and that not more than 10 per cent failed."

REAPING MACHINES.—Mr. Obed Hussey of Baltimore, requests us to publish a correspondence between him and Hon. Wm. H. Roane, relative to the comparative merits of Mr. Hussey's and Mr. McCormick's reaping machines. The great press of contributions from our correspondents utterly prevents complying at present, with the request. We will state however, that Mr. Roane had been one of a committee to report on a trial made by the two machines mentioned, and that the committeee delared in favor of McCormick's machine; but that at a more thorough trial afterwards made on Mr. Roane's farm, Mr. R. changed his opinion, and ordered one of Mr. Hussey's machines.

THE WEATHER IN FLORIDA.—A letter from G. F BALTZELL, Esq. of Apalachicola, (lat. 29 deg. 51m., long. 85 deg. 06m.,) informs us that the peach was in bloom there, Feb. 20—the Native Plum, Feb. 17—the Yellow Jessamine of the forest, about the 10th Feb.—the Quince, Feb. 22. Ther. Fah. March 3, 72 deg.; March 4, 65 deg.

INDIAN CORN.—We have read the letter of our friend J. L. FOREMAN of N. C., with much pleasure. In an article on the culture of Indian Corn, in our last number, p. 79, he will find a detail of the method pursued by several persons who have raised over 100 bushels per acre. It should be remembered, however, that to raise such crops of corn, favorable seasons are as necessary as proper culture. The inquiries about cattle, shall be answered by letter.

TALK ABOUT FARMING.

It is well known that the Massachusetts Legislature is a numerous body of some 400 individuals; that a large proportion of these are practical farmers; and it is much to their credit that they have adopted the practice of holding weekly meetings at which the most important principles of farming are discussed, and mainly with reference to their practical application. In the Boston agricultural papers we find reports of these meetings, and from them, principally from the New-England Farmer and Plowman, we have condensed such of the proceedings as would be of most interest to our readers.

TREATMENT OF CALVES.

Col. Jaques, well known as an excellent breeder and close observer of animals, contended for the practice of letting calves suck the cows the first summer. He finds they are better than when reared on porridge, or in any other way he has yet tried. "Col. Jaques breeds cattle that have large rumps and small shins, because he finds the rump pieces bring four times as much in the market as the shins."* He attributed the degeneracy of our neat stock to feeding calves on slops, and then wintering them as recommended by some, on coarse hay. Sheep and calves require open and large yards. Stables are useless, except in severe weather. Milch cows should be kept warm, as it will increase the milk.

Mr. Graves thought it best to take calves from the cows at once, and let them know nothing about sucking. He gives the calf new milk to drink for three weeks, then meal, rye meal is best, then porridge or skimmed milk.

Mr. Allen loved to follow nature in rearing calves. He preferred having the calf run with the cow and suck at pleasure. In this way it would learn of its mother to eat grass and to drink water early. At three months he would separate the calf from the cow and put it in the pasture with the fat cattle.

SECURING BULLS.

Col. Jaques said many lives have been lost by these animals, and none should be allowed to run at large unless properly secured. Rings should always be put in their noses, as they could then be led or handled without difficulty. Turned to pasture, they should be blinded. "This he had done by tieing on a board two feet long and three inches wide, in front of the horns, and then fastening a leather apron to the board, cutting it three cornered, and bringing it to a point at the nose. Such an apron would be no injury to the animal, and he would never attempt to fight or gore any one with this hood on." (We may hereafter give a figure of this apron, as it appears to us to be well adapted for the end in ended.)

DISEASED ANIMALS.

It seemed to be the general impression of the speakers that animals attacked by disease should be attended to at once; separated from the others; and the proper remedies applied. Col. Jaques said he had a cow that gave him 12 quarts of milk per day as late as November, when she suddenly fell off to 2 quarts. Her horns were warm; he split her tail and rubbed turpentine between her horns. He then gave her half a pound of brimstone, mixed with half an ounce of saltpetre, put a piece of garget or poke root in the lower part of the dewlap, gave her a warm mash, and she was soon well. As an illustration of the bad effect of giving cows cold water immediately after calving, he said that Col. Wainright applied to him to know what the matter was with his cow. He at once suspected she had drunk too much water. To be certain, he charged the Irishman who had the care of her, with neglecting to give her drink enough. "Oh yer honor," said the man, "but she dthrinked three buckets at one time."

MILCH COWS.

Col. Jaques said he had seen cows that were ruined for milk, by eating too much Indian meal. One cow was fed with half a peck of meal per day, and in a short time her great yield of milk was nearly dried up. The celebrated Oaks cow (of whom President Quincy afterwards remarked, "that he was brought up on her milk, and that she was like Melchisedek, without father or mother, so far as he knew,") which made, after the month of May in one season, 484 lbs. of butter, fell off in consequence of eating too much meal, and gave but very little milk. After she came into Col. Jaques' possession, he turned her out to pasture one whole season, without meal, but he could never bring her back again; she was spoiled for milk.

MORGAN HORSE.

The celebrated breed of horses of this name, Col. J attributed to a cross of the Normandy or French horse He thought this the best breed for all work in the country. High spirited, yet fit for all farm purposes. In training horses, we should be particular to say what we mean, and never call out *whoa*, unless we intended the horse should stop; and the same word should be uniformly used for the same purpose.

SOILING ANIMALS.

Mr. Newhall said he had experimented in soiling cattle. Last summer he fed his cows with rye, green from the field. He had 17 cows, and he fed them 30 days on one acre of rye at the first cutting, and 5 days from the rye of the second cutting. He next used clover, beginning with the early southern, and from that to the later northern. After the clover, he fed them on corn, sown in drills for this purpose. His barn is 110 feet long and 44 wide, with a cellar under the whole. His corn was sowed at the rate of 3 bushels per acre; it came up so thick that no ears appeared; and he found on trying one square rod, that he had 32 tons of green fodder per acre. He considered rye and corn the best articles he could sow for feeding; the rye being early, and lasting until the corn would do to begin on. His cow stable is cleared of manure twice a day, and this is immediately covered with about five times as much peat muck; and he finds a load of this compost better than a load of clear manure. Mr. Newhall sowed southern corn.

Mr. Dodge preferred northern corn for soiling. He had weighed the green corn on a small piece, and found he had at the rate of 39 or 40 tons per acre.

Mr. French had raised corn for soiling, but preferred the southern. It would not be tough if sown thick. He thought well of the practice of soiling cattle, and had long practiced it. By using green fodder in July and August when pastures fail, you increase the quantity of milk, you keep your animals in better condition, and greatly increase the manure saved.

President Quincy said he believed he was the first to introduce soiling into the country; that he had kept the whole stock of cows, which formerly required 90 acres of pasture when they ran at large, on 15 acres only, when shut up and fed with green fodder. He thought the soiling plan would ultimately prevail on all lands suitable for that purpose, near cities. He alluded to the saving of fence in soiling. On the farm, when his grandfather owned it, there was 7 miles of interior fence, now there is none; animals being allowed to run on no part of it. Mr. Q. said his father's plan was to grow such a succession of crops, that the cows should be supplied with green food the whole season. His neighbors used to remark that the old gentleman could farm well as long as he could draw on the banks, but doubted as to this being the best mode of farming. Yet the accounts always balanced well at the end of the year.

FATTENING CATTLE.

Mr. Monson said he had been in the practice of fattening cattle for a long time. He believed that cattle would fatten better, confined to one lot, than when frequently removed to new pastures. He had tried the plan to his satisfaction, and he was convinced that it was not a good plan to shift cattle from pasture to pasture. He found that they gained more fat and tallow when kept through the summer in one pasture, than when shifted.

Mr. Buckminster of the Plowman, said this was agreeable to his experience. That if he could have his lots so divided that his cows could be turned into a new one

* If by "large rumps" is to be understood those heavy, cloddy-buttocked animals of the Yorkshire breed sometimes found, we must dissent from the Col's. opinion or practice; if, on the contrary, and as we suspect from the Col's. good judgment, he only means those animals that make heavy hind quarters, or take on flesh where it will be worth the most, as the Short Horns and their crosses, he is right.—Eds Cult.

daily, he would not do it. When they have the whole run, they have a sufficient bite of the new daily growth, which is sweeter than any other.

MANURES.

At a previous meeting, the subject of manures and manuring, underwent a most animated and full discussion. The point of deep or shallow covering of manures, showed considerable difference of opinion among practical farmers. The opinion of some, derived from experience, was that there was little danger of covering manure too deeply, while others controverted this position strongly. The advocates of deep covering manures, adduced Judge Buel as in favor of that practice; while others stated that they had covered so deep that their crops derived no benefit from its application.

We have tried manures on different soils and at different depths, for many years, and carefully noted the results. Our experience has convinced us that all manures which are unfermented should be covered, but not deeply. The use of the covering of earth is to absorb and retain the matters, gases, &c. thrown off during decomposition, and more than is sufficient for this, is useless if not injurious. Composts, or thoroughly rotted manures, may be covered slightly, but will produce better effects on crops, if only harrowed in on the surface, than if turned under deep with the plow. Much too is depending on the character of the soil, in applying manures. Long coarse manures plowed into compact, heavy soils, render it less dense, and are in this way, as well as in the nutrition afforded to plants, useful. In light sandy soils, the object is to give more compactness to the surface, and hence deep covering of the manure, when applied in its long or unfermented state, is best; and it was on such a soil that Judge Buel's experiments were made. In forming opinions on such matters, attention is usually not sufficiently given to the different circumstances of soil, state of manures, &c., hence such conflicting statements as to practice and results. We proceed with our condensation of reports.

PREPARATION OF MANURES.

Mr. Hardy said every farmer has the materials on his own farm to enrich it. How shall he apply them? How make his compost heaps? I answer, with his yard manure, and his soil mixed with it; and in the room of lime and ashes, give me hog's noses. Writers may talk about their chemical or mineral manures; keep hogs, hogs! Keep them in cellars, and throw in your hassocks; their noses will sooner decompose a hassock, than all the nostrums of the chemists. Hogs will work better than your Irishmen, though it may cost more to keep them. Hogs will work seven days in a week, while you must be pretty lucky to find an Irishman that will work six. If a farmer has a dozen head of cattle, he may make 50 cords, or 200 loads in a year. He must occasionally haul materials from the first of July until December. Others, nigh the city, may buy manure, but I can't afford to haul it to my farm; I can make it for half of what it costs in Boston. Some farmers with 40 head of cattle, make less manure, than others with 7 head. Keep cattle, make your hogs work; no labor is cheaper than that of the hog."

SALT.

The testimony in favor of the use of salt, was very conclusive. Mr. Everett had applied it to corn at the rate of two bushels per acre to keep off worms, and with the desired effect. The corn grew well, and where the salt was strewed most profusely, the crop was most luxuriant. The field had not been plowed for a number of years.

Mr. Merriam said he had used it successfully in destroying worms in his garden. He puts brine in his compost heap, and thinks salt a valuable manure, but too costly for general use. (In the vicinity of our salines in the interior, every advantage for experiments with salt is afforded; and we hope it will be undertaken by many. We think that the refuse of the works, called *bitterns*, would be a capital manure, especially on dry sandy soils. This substance may be obtained in any quantity. It consists of muriate and sulphate of lime, strongly impregnated with chloride of soda. Some who have tried it, speak highly of its efficacy, a result to be inferred from its composition.—EDS. CULT.)

GYPSUM.

Mr. Everett of Princeton, said that he had used plaster in dry ground, successfully; that in a field of potatoes he experimented on four rows through the middle of the field: in two rows he manured in the hill, in the other two, manure was not used. To one of the rows with manure, and one without, he applied about a table spoonful of plaster to each hill. The potatoes had a yellow, sickly appearance, when they were dressed with the plaster, but in a week recovered, and looked well through the season; and the rows with the plaster could be distinguished a mile from the field. When the potatoes were dug, the result was as follows:

1st row	with manure alone,	it took 28	hills for a bu.
2d "	with manure and plaster,	15	"
3d "	plaster, without manure,	20	"
4th "	neither plaster or manure,	38	"

ASHES AND LIME.

Dr. Jackson said that ashes and lime alone would render a soil fertile. He had analyzed a soil, a blowing sand which had been manured with ashes alone, for 7 or 8 years, at the rate of 200 bushels to the acre, and found there was 3 per cent gain of organic matter after the crop was taken off. Light soils are the most benefited by ashes, while heavy clay soils are but little. The first effects of unleached ashes are the most powerful, but the effect in succeeding years, show that leached ashes are as good. It should be remembered that the lime which is added to leached ashes, more than repays the loss of the alkali.

Mr. Robinson said he had used ashes and lime, mixed, two parts of the first to one of the latter, as a manure for potatoes: half a pint to a hill, at the time of planting, the soil light and loamy. Where the manure was used, 7 hills produced as much as 12 not so manured. The lime had been slacked some time.

We cannot further extend our condensed extracts at this time. The conduct of the Massachusetts Legislature is deserving of commendation and imitation. It is our firm conviction that if a large portion of the time of the legislatures of the several States, that is now occupied in filling our statute books with useless or conflicting legislation, was spent in discussing such subjects as the improvement of stock, the preparation of manures, or the cultivation of crops, the country would be quite as much benefited, and their constituents receive as little detriment as they now do.

FINE MEAT.

The Centre Market in this city presented a rich show on the morning of the 22d of February last. The butchers purchased for that occasion, some of the finest cattle and sheep that could be had. Among the cattle were two very superior cows; one a full blood Durham, purchased of E. P. Prentice, Esq. of this city, and bred in England by the Earl of Derby; the other, also a full blood Durham, bred by Mr. Van Rensselaer, and purchased of Col. Gilchrist. Both were remarkable animals, and though no particular pains had been taken in fattening them, their beef was pronounced of excellent quality. Mr. Prentice's cow had only been fed with a view of killing her, since November last; and previous to that time, she had been kept on extremely poor food—for two winters, having been fed on *nothing but straw*, in the hope of so reducing her flesh, that she might again breed. Mr. Gilchrist's cow had a calf last spring, and was only five years old, yet her beef was of most extraordinary fatness and quality.

The sheep in market were mostly of the Leicester and Cotswold breeds, from the flocks of Messrs. McIntyre, Bullock, Dunn, &c. They were prodigies of fat—the carcases weighing from 130 to 175 pounds each. We noticed an uncommonly fine wether, a cross of the Cotswold and South Down, bred by Mr. McIntyre.

Liberality in good barns and warm shelters is the source of health, strength and comfort to animals; causes them to thrive on less food, and secures from danger all sorts of garnered crops.

DR. LEE'S REPORT.

In the Assembly of this State, on the 7th ult., Dr. LEE, chairman of the committee on agriculture, to whom was referred so much of the Governor's message as relates to agriculture, and also the annual report of the New-York State Agricultural Society, embracing returns from forty-six counties, submitted the following report:

So far as your committee have been able to examine the manuscript essays and official reports made by the State and County Societies, they appear to be drawn up in strict conformity to existing laws, and therefore your committee do not feel at liberty to alter or abridge them in any respect. Taken as a whole, these documents contain a large amount of information of great practical value to the farming interest of the State. The Treatise of Mr. Gaylord on Insects Injurious to Field Crops, &c.; the Essay on the Introduction of New Agricultural Products, and on the Importance of the Geological Survey in its connexion with Practical Husbandry, &c., are worth many times the cost of publishing all the reports. Hitherto it has been customary to print ten times the usual number for the use of members of the Legislature and State Officers, 500 copies for the use of the State Agricultural Society, and 20 copies for each of the county societies. Believing that these documents will compare favorably with any that have preceded them from the same source, and are well calculated to render the agricultural labor of this great State more productive to the community at large, as well as more profitable to the cultivators of the earth, your committee do not hesitate to recommend the printing of the number of copies above named.

In his late message, the Governor says: "The number of acres of land charged with taxes in 1842, was 27,176,-934, valued at $504,254,029." According to the State census of 1825, the number of acres under cultivation was 7,160,967. The same authority in 1835, gives the number at 9,656,426. At this time the number of acres under cultivation, probably does not vary much from 11,000,-000. According to the U. S. census of 1840, the number of persons actually employed in rural pursuits, was 445,-954; while the whole number actually engaged in manufactures, the mechanical arts, trade, internal, coasting and foreign commerce, was 207,172. These brief statistics demonstrate the important truth that agriculture is the great productive interest of the State of New-York.

Your committee deem it not out of place to inquire whether the half million of laboring people, who cultivate eleven millions of acres of fair farming lands, do now realize as large a return for their capital and industry, as is practicable?

In the returns of the census of 1840, the wheat grown in this State, (12,286,418 bushels,) was estimated at $1,20 per bushel; corn (10,972,286 bushels,) at 75 cents; oats (20,675,847 bushels,) at 44 cents; and hay (3,127,047 tons,) at $10 per ton. At these prices, which are now too high by one-third, the aggregate products of all our rural industry were valued at $109,071,416. Reduce this gross sum to $77,000,000, as it ought to be, and divide that by 11,000,000, the number of acres in cultivation, and the average crop was worth only seven dollars per acre.

From considerable experience, much study and reflection, your committee are of the opinion that the 11,000,-000 acres of cultivated lands in this State, might be made to yield, without any additional expense, an average of $3 per acre more of the valuable fruits of the earth, than they now do. In other words, the same labor, which is now measurably lost through ignorance of the laws of nature, through inattention to the constituent elements of all cultivated plants, and of the affinities that govern their chemical and organic combinations in practical agriculture, might, by the aid of plain and available science, secure to our farmers ten dollars worth of agricultural products, where they now get but seven dollars worth. For what purpose does the husbandman toil so hard throughout the year? Is it not to transform certain elements of earth, air and water, into cultivated plants; and these again, into domestic animals, beef, pork, mutton, butter, cheese and wool? And what are these elements of earth, air and water, which the well or ill applied labor of the farmer changes into wheat and other grain, into grass and roots? Where is the practical agriculturist to find the raw material of one good ripe wheat plant; and how must the necessary ingredients be combined and applied to the soil, so as to realize the largest crop at the least expense?

To say nothing of the gaseous and earthy elements necessary to make good firm wheat straw, we now take over 12,000,000 bushels of the raw material of wheat bread from our fields every year, and never stop to inquire whether this system of culture will or will not rob our wheat lands of all their bread-bearing elements. Not one particle in a thousand of the elements of bread, after entering human mouths, ever finds its way back again on to the field from whence it was taken. If we are certain that the benevolent Author of our being will create *anew*, annually, 12,000,000 bushels of those particular ingredients which make that amount of wheat, and will keep good all the elements of straw not returned after the harvest, then perhaps our fields may not suffer by continuous cropping without renovation. But Heaven will not create one particle of matter for our especial benefit, though the two and a half millions of people in New-York shall waste the raw material of 50,000,000 bushels of grain every year, until they shall have no more to waste.

To prevent farther loss, and regain all the fertilizing elements taken from our cultivated lands since their first settlement, are objects of great public importance. Man is indebted to agricultural science for the invaluable discovery that not far from 97 per cent of all the elements of cultivated plants exist in the air in exhaustless quantities. These are carbon, nitrogen, oxygen and hydrogen, the two latter forming water. The combustion of wood and coal, the respiration of all animals, fermentation and the decomposition of all organic matter throw into the atmosphere a vast amount of the ingredients necessary for the re-construction of vegetables and animals. To say nothing of water and its elements, which play an important part in all organic structures, *carbon* is the largest and most expensive element in the production of plants and domestic animals. It is the basis of vegetable mold —"the fat of the land"—and combined with the constituents of water, forms veritable fat and butter. It is some consolation to know that there are no less than seven tons of pure carbon diffused through the air over every acre of land, whether barren or fertile, upon the habitable globe.

The earthy part of the wheat plant forming less than 3 per cent of its solid substance, consists of silica, (flint,) lime, potash, soda, magnesia, alumina, (the basis of clay,) chlorine, sulphur, phosphorus, and a trace of iron. All these minerals are indispensable to the production of one good wheat plant. Hence, if a farmer had an abundance of all the other elements in his field to grow forty bushels of wheat on an acre, and it should be destitute of phosphorus, that defect would be fatal to the crop. There is good reason to believe that if a practical wheat grower will restore to his field every year all the raw material of that bread-bearing plant, a large crop can be harvested from the same soil year after year, as well as to let it lie idle, or to cultivate other grain for three or four years and then grow wheat again. Persons unacquainted with the very compound nature of wheat, are apt to imagine that the application of *one* fertilizing element, lime for instance, ought to suffice to produce a good crop. They are ignorant of the fact that every kernel and stem of wheat has twelve other indispensable ingredients in its composition. Millions of days of hard labor are annually thrown away in New-York alone, in a vain attempt to transmute one mineral into another. Our farmers are searching for some strange philosopher's stone that will change lime into potash, potash into magnesia, magnesia into flint, flint into clay, clay into sulphur, sulphur into iron, iron into phosphorus, phosphorus into nitrogen, nitrogen into carbon and carbon into oxygen. When a man can make the half of a thing equal to the whole, then he may raise a good crop of wheat where his soil lacks one-half of the elements of that grain.

Your committee believe it practicable to increase the annual products of our present rural industry 33⅓ per

cent, without the aid of one dollar additional capital; that is, they believe that full one-third of all agricultural labor is literally thrown away by its misapplication. The uniform laws of nature will not vary nor accommodate the needless ignorance of man. Hence it follows that man must apply his labor in strict conformity to the unerring laws that govern the changes of matter, or toil on through life giving two days' work for those necessaries and comforts, which an understanding of the laws of nature would have secured to him in exchange for one day's work. The whole doctrine of eternal hard work and penurious living as the best means of acquiring wealth or the comforts of life, your committee deem unsound. The inevitable effect of this popular system is to degrade and brutify, rather than to elevate our race. Mere muscular labor, mere mechanical power, no matter how great its force, without adequate knowledge to guide and direct it, is far more likely to act wrong than right, for the simple reason that there are *five wrong ways* to do almost every thing, where there is *one right way*.

All men have intellectual organs that require development and peculiar nourishment, not less than stomachs which need daily food. Has not the Creator of man manifested his approbation of human efforts to acquire wisdom, even worldly wisdom, by making the *ignorant* in all ages of the world, the *servants of the wise*.

A knowledge of the arts of plowing, sowing and reaping may do for the purpose of wearing out a productive farm, but something more is necessary to enable its owner to give back annually to each of his cultivated fields the precise elements removed by the harvest, and that too at the least possible expense.

Suppose a farmer now cultivates six acres of land in wheat, to harvest 100 bushels, how is he to manage so as to grow 133 bushels at the same expense? If he can raise 33⅓ bushels per acre on four acres, that will give him the amount desired and save the whole cost of cultivating two acres of land. This saving may be set down at $8 per acre, which will give $16 surplus to be expended in purchasing the raw material to produce the extra 66 bushels of wheat on the four acres to be cultivated by a new process. As about 94 per cent of ripe wheat plants consist of carbon and water, charcoal must be an important element in fertilizing the soil. Of the other 6 per cent about one-half is nitrogen, and the other moiety is made up of silica, potash, soda, magnesia, alumina, phosphorus, sulphur, chlorine, and a trace of iron. Let the wheat grower take 100 bushels of charcoal, grind it fine in a bark mill or pulverize it well with flails on a threshing floor, and add thereto five bushels of ground plaster. This would not cost in most farming districts in this State over $7, and if the coal and gypsum be placed in a vat or large tub and saturated with the urine of cattle, or partly moistened with the liquid excretions of the human species, and have five bushels of leached ashes mixed with the mass, it will contain all the elements of 133 bushels of good wheat. In case the urine can not be had, the addition of four bushels of salt will give all the soda and chlorine that is needed, while the ashes will furnish all the potash, silica and magnesia required. The plaster will yield the sulphur and lime, and a bushel of bone dust will give the phosphorus. A little copperas will supply the necessary iron, and the charcoal will not only yield carbon but it will also absorb ammonia always found in rain water when it comes from the clouds.

All these constituents of wheat can be best applied to the soil before sowing the seed, but a top dressing of a compound of coal, plaster, ashes and salt, moistened with whatever urine can be collected, may be applied to winter or spring wheat in April or May, with signal benefit to the crop. Deep plowing and thorough draining are important aids in wheat culture, for reasons which your committee will not stop to explain.

The liberal use of freshly burned lime is very beneficial by the way of correcting any acidity of soil; and also by absorbing carbonic acid from the air, to be given up to the roots of plants, and thereby promote their growth. A pint of human urine contains ammonia enough to supply a bushel of wheat with all the nitrogen it needs. And it is worthy of remark that wheat well supplied with nitrogen in ammonia, will contain from ten to twenty per cent more gluten than it would if it lacked that element, while the wheat that abounds in gluten will make from seven to fifteen per cent more good bread than the same quantity of flour composed almost entirely of starch.

In Flanders, farmers pay forty shillings, or nearly ten dollars a year for the urine of a single cow, for that length of time, to be used in the culture of wheat and other crops. Common sense would seem to teach every agriculturist that he should restore to his fields every particle of the liquid and solid excretions of all animals that feed upon his crops.

A little study of the science of animal physiology would convince every practical farmer that not far from one-third of all the grass, hay, roots and grain that enters the mouths of his domestic animals is needlessly lost, owing to some removable defect in their organic structure. Less than one-half of the solid matter taken into their stomachs is voided by the bowels and kidneys. On an average, more than three-fourths of all the carbon that exists in the food of all respiratory animals escapes through the lungs. The action of these important organs, which never ceases night nor day, governs the elaboration of muscle, fat, milk, and wool, in such domestic animals as are kept for their strength, as the horse and ox; their milk, as the cow; their flesh and fat, as the pig; and their wool, as the sheep.

Your committee do not feel at liberty, inviting as is the subject, to extend this report so far as to explain the means and process by which the organic structure of our six millions of sheep, two millions of neat cattle, and as many swine, can be greatly improved. The loss in one winter by the throwing away of animal heat in this State alone, which heat, be it known, is generated not by burning cheap fire-wood or coal, but by the combustion of the carbon in hay, grain and roots, or of fat in the animal, is not less than four millions of dollars. A man that eats half a pound of beef, two pounds of potatoes, and half a pound of bread, will expel with moderate exercise, carbon enough from his lungs in 24 hours to heat 270 pounds of water from 32 deg. up to blood heat. A knowledge of physiology would be of great practical service to our rural population by teaching them how to avoid many of the exciting causes of disease and protracted suffering.

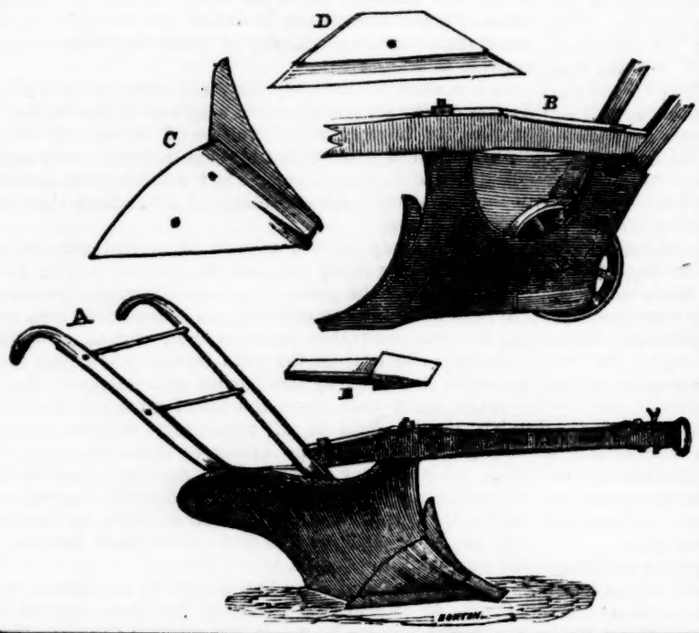
Your committee respectfully suggest that the Legislature might authorize the State Agricultural Society to employ a practical and scientific farmer to give public lectures throughout the State upon practical and scientific husbandry, at no higher compensation to be drawn from the State treasury than the pay of a member of this House, to the great benefit of the agricultural interest of the State. Having visited every rural district and learned the condition of the soil, and in a good degree the precise wants of its cultivators, such person, if otherwise competent, could compile a work admirably adapted to all the peculiar circumstances of our farmers, which might be placed in all our school district libraries, at the expense of the funds of such libraries. A work on practical and scientific husbandry, embracing all the discoveries and improvements recently made in this most important branch of productive industry, and carried home to the fireside of every practical farmer, could not fail of being eminently serviceable to the community at large.

In the opinion of your committee, practical science to be truly useful, should be carried home to the understanding of every mind which controls a pair of laboring hands, that those hands may work at all times to the best advantage. The knowledge of the few, no matter how profound, can never compensate for the ignorance of the many.

There are moral considerations, which might be urged with great propriety in favor of agricultural and mechanical schools, and public lectures upon the natural sciences, inseparably blended with the every day operations of life; but your committee may well leave them to the good sense of the House.

A MOTTO.—The Massachusetts Plowman says—"Farmers cannot afford to keep poor cows, or to keep cows poor."

SINCLAIR & CO.'S PATENT WHEEL SELF-SHARPENING PLOW.



Of this plow, Messrs. Sinclair & Co. give the following description:—"This plow has the advantage of a wheel attached to the land side, *b.* or what may be termed a rolling land-side—has a long curved, high breasted mold-board, *a.* which turns the furrow-slice to admiration; the point and wing are in separate pieces, and are formed so as to be reversed when they become dull, thus forming a self-sharpening principle. The point and share are fastened by a plate *e. d.* secured over them by two bolts, which protects them from the wear of the front edge of the mold-board. The point is made with either wrought or cast iron, and may be used in clean or the roughest lands; the beam of this plow has two bearings on the casting; one on the mold-board and the other on the back part of the land-side, and so attached that it can be thrown to or from the land in a moment."

Price, with cast point and share, $10—with wrought point and share, $12. Made and for sale by R. Sinclair, Jr. & Co. Baltimore.

INFORMATION ABOUT SHEEP AND WOOL.

MESSRS. GAYLORD & TUCKER—I received a short time since, the following letter from Samuel Lawrence, Esq., well known as one of New-England's most intelligent and successful manufacturers, which contains information and hints of a useful character to farmers; and therefore permit me to recommend its publication in your widely circulated and useful periodical. A WOOL GROWER.

Lake Ridge, N. Y., March 15, 1844.

Lowell, Feb. 24, 1844.

DEAR SIR—Your esteemed favor of the 8th, covering some questions, was duly received; and I have now great pleasure in handing you replies.

You ask 1st—"What will full blood Paular wool, after washing on the back, waste by the manufacturer's cleansing?"

The American Paular wool will shrink 40 to 45 per cent. I know a flock of Paular and Negretti selected in Spain by George Flower, Esq., and carried by him to the prairies of Illinois, twenty-seven years ago, which yielded 60 lbs. to the 100, two years since. This wool now strongly resembles Saxon; the fleeces weighed 2¾ lbs. This flock had never been crossed with any other blood.

Query 2d.—"What price did Paular command in July last, and what is about the average weight per fleece in general?"

We paid for full blood Montarco* wool in July last, 44 cents; the fleeces averaged 3¼ lbs., and lost by scouring, 44 per cent. We bought no full blood Paular wool.

Query 3d.—"Have you any reason to suppose that Saxon sheep are going out of repute?"

I am well acquainted with a great many owners of Saxony flocks, and in no instance do I know that a change is contemplated; on the contrary, every thing is doing to make the wool finer. I believe that by proper care in crossing, the length of staple may be increased without affecting its fineness. This is a desideratum of great importance to breeders, and should receive their serious consideration. A few years ago it was thought by manufacturers that very short stapled wool only would make fine goods. Now the quality of the staple is looked at without regard to its length. I beg you to give this matter your best attention; for if 8 to 10 ounces of wool can be added to every fleece in the country, it will place both growers of wool and manufacturers on such a basis, that no foreign competition could touch them.

The Saxon sheep were carried from Spain and improved in Germany. Why can't the Merinos be brought up to the same height in this country? We have stapled some American wools of great beauty, and finer than any Spanish wools that ever were imported into this country.

The best blood of Saxony sheep is in very high repute in Europe. It is but three years ago that six hundred dollars each were paid in Germany for a large number to be carried to Russia. I have specimens of the wool. Is there any reason why we can not do as well by starting with the right blood?

As to encouragement to the wool growers, in my opinion, their prospects were never as good; and among other reasons, are first: a majority of the people are coming square up to the mark in favor of a "*protective tariff*," and the wool growers have learnt that *this* kind of tariff, is quite as useful to them with their three hundred millions in sheep farms, sheep, &c., as it is to the woolen manufacturers with their twenty millions in mills, machinery, &c.

Second. There is infinitely more skill employed in the working of wools, and more talent and character in the general management of the woolen business than at any former period.

Third. A number of new branches have lately been undertaken with entire success. The making of *mouislin de laines* has been commenced also under the most favorable auspices; and last, though not least, the horde of "drab gaitered gentry" from Yorkshire,* which infested New-York city for so many years, has been broken up and driven from our shores.

The advance in the prices of all kinds of wool will be fully sustained. The article has been depressed below its value, all over the world for three years past; but it has now turned, and a considerable advance has taken place in Europe; the next German fairs will show more animation in the demand than has been seen for a long time.

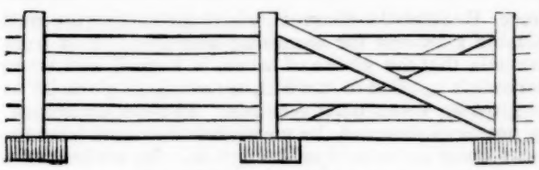
It is a singular coincidence that when writing you on this subject, I should this moment hear the report of the death of our mutual friend, H. D. Grove, of Rensselaer, with whom I have long been on terms of intimacy; the shock to my feelings is very great, for I was sincerely attached to him. A more reputable and honorable man did not live, and he was truly an honor to his calling.

Your ob't servant, SAMUEL LAWRENCE.

* A distinguished variety of Merino.

BOUNTY ON SILK.—The Legislature of Tennessee has passed an act offering ten cents per pound on cocoons, and fifty cents per pound on reeled silk produced within the State.

* Smugglers.



FENCES.—(Fig. 31.)

We find in the Maine Farmer a description and figures of a fence as made by Mr. Dennett of Buxton. It strikes us as a good fence, and worthy of adoption where stone for the sills can be had. The regularity of the stones for the sills, can be of no consequence; it is enough that they are of considerable size, and with a flat surface. We copy Mr. Dennett's description in part, and his figures. It has occurred to us, that in many parts of our country where stone is not convenient, blocks of red cedar or locust, of the required length might be substituted for stone, by being bedded in the ground, and the posts secured to them as to the stone.

"I have stone sills from 4 to 6 feet long, 6 inches square, which I lay level on the ground with a flat stone under each end, where the land is wet and soft. On each sill I strap two posts made of 2¼ inch plank; my rails pass between them which are sawn 25 feet long, 6 inches wide, 1¼ inches thick. The plank from which the posts are made should be of the most durable kind of wood, and about 14 inches wide. Saw them into 4 feet lengths. Set on 2 inches from each edge at both ends of the plank and saw it in two. See *d*. fig. 32. [At the saw

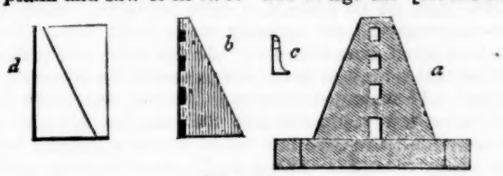


Figure 32.

mill, all the posts that a log will make may be cut at once, a great saving of labor.—Eds. Cult.] Now you will have two posts, each 2 inches at one end, and 12 at the other. Fit these two posts to a sill, and mark where to drill the holes for the iron straps, as at *a*. fig. 32." Gains are cut in the inner edge of each post for the rails, 1¼ inch deep, so that when put together, the post appears as in *a*. fig. 32. Before placing together, the posts appear as in *b*. fig. 32. The iron straps for securing the posts to the sills are made 8 inches long, ¾ inches wide, ¼ inches thick. The straps should be let into the sill 2 inches with a dovetail. See *c*. fig. 32. The bottom of the hole in the stone must be the widest, to receive the dovetail of the iron, which is fastened in the stone by a key ¼ inch square, drove by the side of the iron strap. The strap is secured to the posts by large nails or spikes two in number. The first length is broad, as shown in the cut, and the bracing is repeated every 15 or 20 lengths. A pin is put through the bottom rails each side of the posts, and a bolt of three-eights round iron through the posts and top rails as in *a*. fig. 32.

The cost of this fence is stated by Mr. Dennett to be $1,35 a length of 24 feet, or 92 cents a rod. It appears to us that a cap of 1¼ inch boards nailed on the top of these posts, would give the fence more firmness, a little more height, and the top of the posts more durability.

Another fence of a somewhat similar construction has been described to us, much cheaper at first, but which would be less firm and durable we should imagine, than the one above described. Figure 33 will show at a glance, the construction and appearance of this fence.

In this rough sketch of the fence alluded to, the posts, 3 and 4 inches square, stand on flat stones, level with the surface, and are 3 feet in length. The lower board is 14 inches in width, and the upper 12 inches. The cap piece is 5 inches wide and 2 inches thick. Stakes of durable wood at every post, or at every other one, support a rider made of a rail, or better of a long pole, which will reach several lengths. The distance of the posts will be determined by the length of the boards used; it should not be over 10 or 12 feet. As the bottom of the

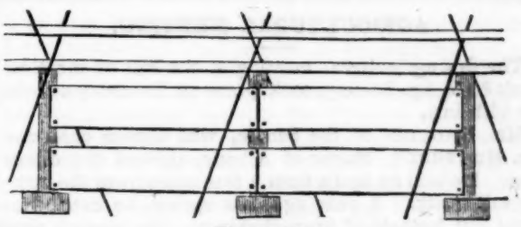


Figure 33.

posts are not secured, we should apprehend that winds or animals would shove them from the stones; but if fastened by an iron, spiked to the post, and let two inches into the stone, the bottom, and indeed the fence itself, would be immoveable, so long as the stakes remained sound. The black dots show where the spikes would pass to secure both the bottom pieces at the posts, and the boards themselves.

SHEEP IN VERMONT.

We have received a communication, signed "Old Chittenden," in reference to sheep, their improvement, &c. An unusual press of matter, prevents our giving anything more than a brief notice of its contents. The writer states that he has traveled extensively in 23 States of the Union, and he has nowhere seen sheep that produce as much wool of the same quality, with the same expense of keeping, as some flocks in the State of Vermont. He says there are farmers who have so improved their sheep, as to clip from four to five pounds per head; though when they began, their sheep only averaged two and a half to three pounds. He remarks, that as *profit* should be the main aim of the farmer, he is desirous of learning what methods of breeding and keeping sheep, have been found most successful in this respect, and he wishes practical men would communicate the results of their experience.

"Old Chittenden" speaks of keeping sheep on the western prairies, and on this point, differs from his neighbor, Mr. Jewett. The *dry* prairies, "Old Chittenden" thinks will make the very best sheep pastures. He says he speaks from his own observation—having been much on the prairies. He thinks the prairie farmer will not probably rear as large sheep, or cut as heavy fleeces as the Vermont farmer, but the former will produce them at half the expense.

POINTS OF A HORSE.

It was formerly said that a horse should have three qualities of a woman, three of an ox, three of a mule, three of a deer, three of a wolf, three of a sheep, three of a fox, three of a cat, and three of a snake. Mr. Hooper of the Western Farmer and Gardener, gives the fol lowing interpretation of this, from Denton Offutt, the animal manager:

"Three of a woman, deep chest, full bosom, long hair Three of an ox, eye, nostril, joints. Of a mule, hoof, strength, perseverance. Of a deer, head, legs, hair lays well. Of a wolf, breast, loin, lope. Of a sheep, face, patience, mildness. Of a fox, ear, tail, foot. Of a cat, walk, action, leap. Of a snake, sight, memory, and moulting."

Offutt, whose name is mentioned above, we are told, is much distinguished in Kentucky, for his success in taming animals. His rules, (as given in the Farmer and Gardener,) seem to be simple and rational. His first object is to confine the animals in a small space. Then approach them slowly and quietly—induce them to eat salt from the hand—rub them all over with the hands—always moving the hand with the direction of the hair—speak softly and soothingly to them, rubbing them at the same time about the face and head. Feed them only moderately, so that they may be always ready to take food and water. Never strike them a blow.

To prevent a horse from lying down in harness, he says, "tie him down with a rope, so that he cannot get up, and keep him so ten hours. Then let him get up, and work him for an hour. Give him water from your hand, and feed him; this tends to make him like you, removes fear, and restores confidence."

AGRICULTURAL MEETING.

The first agricultural meeting at the hall of the New-York State Ag. Society, took place on Thursday evening the 14th inst.

Mr. RHOADES of the Senate, was chosen chairman; Mr. HUMPHREY, Mayor of Albany, opened the discussion. He said he had a farm a few miles from the city—the soil sandy. A year ago last spring, he carried out about 250 bushels of horn-shavings. He planted about three acres to corn, and put a very small quantity, only what could be held between the thumb and finger, in each hill, and used no other manure. The corn grew surprisingly, so much so, that it attracted the attention of the Shakers as they passed by it; and they wanted him to have the crop particularly measured at harvesting. He did so, and found there was 126 bushels of ears, or 63 bushels of shelled corn to the acre. The corn was the small eight rowed kind—was all sound and very heavy. He thought the land would not have produced over 15 bushels per acre, if he had not used the horn-shavings or other manure. He also used the horn-shavings for potatoes, and they did remarkably well.

Mr. BEMENT said he had used horn-shavings. He usually made them into compost with anthracite coal-ashes, muck, &c. He had applied this mixture to corn, potatoes and turneps, and found it excellent. He had used hog's bristles; got about 60 bushels, one year, and used them with potatoes, putting a handful in a hill, at the time of planting. The season was a moist one. Where the bristles were put, the yield was double what it was in other parts of the field, where he used the common quantity of stable or yard manure, though the soil was quite similar. He had also used the refuse of a glue factory, (hair, bits of skin, &c.) which is a powerful manure. He had used fish, also. A few years ago, he got 6 barrels of damaged fish, which he used as manure. He facetiously remarked that he was fond of fish and potatoes, and he thought he would try the effect of mixing them together at planting time. He therefore put half a fish to a hill, on one-half the lot, and on the other half, he put manure. (We did not understand him to say how much manure he used per acre.) The soil was a stiff loam. Where the fish were put, the tops were best through the season, and the yield of potatoes was double what it was on the manured part. The effect of the fish was shown in the succeeding crops of carrots, oats, &c. for three years.

Prof. EMMONS said he thought horn-shavings were a good manure—probably better than bones. Both contain phosphorus and ammonia, and bones contain lime. Ammonia is an essential ingredient in Indian corn, being found in the grain. Liebig attributes the action of gypsum to its power of fixing the ammonia; that is, he supposes it to absorb the ammonia existing in the atmosphere, which is thus brought within reach of the plant. Prof. E. would account principally for the action of horns, bones, &c., from their containing the food or elements of plants. He thought the action of the fish spoken of, was prolonged by the animal matter being combined with salt. He spoke of other substances as manure. Nitre, he said, has a tendency to produce large stalks, but not so much grain. In regard to the existence of ammonia in the air, and its being brought down by rain and snow, Prof. E. said he had by evaporation, detected it in snow—it was very perceptible by its scent, and affected the olfactories in the same manner as the hartshorn of smelling bottles.

Dr. LEE spoke in reference to the crop of corn raised by Mr. Humphrey. He thought the ammonia of the horn-shavings produced the principal effect; but it was not wholly by supplying the plant with this substance as food—it had a stimulating effect—by which more root and leaf was formed, and the plant enabled to seek and obtain other food, both from the earth and atmosphere. Plants contain 50 per cent of carbon, and they absorb this substance largely by their leaves; hence, by inducing the plant to put out leaves, its means of obtaining carbon are increased. Common sal ammoniac has been found highly beneficial in stimulating the growth of corn—the corn being soaked just before planting, in a solution of this substance. He alluded to charcoal, which he thinks is the most valuable substance for absorbing ammonia. It is from ammonia that the gluten of wheat is formed, and when charcoal is applied to the soil, ammonia is given off as the growing wheat plant requires. To show the absorbing power of charcoal, he mentioned that Port wine loses its color on being run through it. He looked for a great increase in the yield of wheat from the use of charcoal; he had himself already produced wheat heads 6½ inches long, and containing 140 kernels each. He believed that a yield of 60 bushels to the acre was attainable in this country. The English, said he, have now gone beyond that, and have produced 80 bushels per acre. He thought ashes would be a very valuable manure on the sandy soils in the neighborhood of Albany. The potash would render the flint of these sandy soils, soluble, by which material for the straw would be provided, and by adding charcoal and bones or horn-shavings, the ammonia, phosphorus, &c. necessary for the grain, would be supplied. If the charcoal was saturated with urine, it would be better, because this would give the elements of the grain at once. He would also use some lime on such soils; though where lime is scarce, he would recommend only a moderate quantity, say 10 bushels to the acre. This he would apply at the time of sowing the seed. Clay would probably do well on these sandy lands. Clay has an alkaline quality, and hence its action would be in some degree similar to ashes; besides it would act mechanically, by rendering the soil more retentive of water, &c.

Dr. L. alluded again to Mr. Humphrey's corn crop. Mr. H. took off 60 bushels of corn per acre. Now the horn-shavings did not actually make half this. What then was taken from the soil? In the stalk and leaf, he took off that which in some shape should be returned to the land. If when the corn was husked, the stalks had been immediately plowed into the land, he thought the matters which the corn had taken out of it, would have been nearly restored. If the stalks were eaten by cattle, then both the dung and urine should be put back on the land.

Mr. J. C. FULLER of Skaneateles, said he was pleased to be at this meeting. He found himself among scientific men, and perhaps it would be better for him to do as a friend once told him he did—that is, keep still and see what others did—but he would make a few remarks. He would repeat that he was glad to see a disposition to encourage such meetings; *farmers* should come here, and bring their sons with them. He had noticed the remarks that had been made about horn-shavings and other sub stances, used as manures. He had been interested in what had been said; but he wanted to know one important thing which he believed had not been mentioned, and that was, how much these substances *cost*—how much *profit* there was in using them. His object was to see how much *money* could be made by any plan or mode of operation.

In regard to the mode of applying lime, he thought the best way was to put it on the ground, before it was slaked, in small heaps, and throw a little earth over it, and let it thus remain till it is slaked.

He spoke of the agriculture of England, his native country. He said he had spent a considerable part of the last year in that country. Great improvements had been made there within a few years. It might be said that they were much in advance of us; yet many of their modes of farming are not adapted to our circumstances. We must, therefore, have a system in some degree peculiar to ourselves; and it should be the object to seek such modes as are adapted to our climate and general condition. He would not discourage improvement; he was in favor of it, but he thought farmers might well use caution in adopting untried schemes. The chemist may make useful suggestions. He had formerly some acquaintance with chemistry himself; but he believed men might be good *farmers* without being good *chemists*. He knew many such in England and in this country.

Some remarks were made by the chairman, also by Mr. HORSFORD, Prof. HALL, and Mr. STRONG, which for want of space, we are obliged to defer.

The meeting was adjourned to Thursday evening next.

NATURAL FERTILITY OF WESTERN LANDS—DETERIORATION FROM CULTIVATION, &c.

The west is justly famed for its fertility. The alluvial banks of the Ohio, with its tributaries the Muskingum, Scioto, Miami and Wabash, as well as many other portions of the great valley of the Mississippi, are probably unequaled for richness, and the luxuriance of their productions, by any portion of the globe. The citizen of the northern and less fertile sections of our country, on passing through these rich vales in the midst of summer, and for the first time beholding the exuberant vegetation which there springs almost spontaneously from the earth, is struck with astonishment! From some points, his eye rests with admiration on the dark-green corn-fields, stretching for miles before him, and embracing at a single glance thousands of acres! Neither is his wonder lessened as he views the stately magnificence of the plant itself. The corn which the stranger here sees, is not the dwarfish thing which he or his fathers may have cultivated on the rocky hills of New-England, but a larger variety of that "*king of vegetables*," whose topmost leaf is higher, perhaps, than the walls of his own dwelling! Here may be seen from 100 to 400 acres, and sometimes even 600 or 700 acres of corn, belonging to a single individual; from 100 to 300 head of cattle, and 100 to 500 hogs being annually fattened from the produce of a single farm.

But the extraordinary productive power of these lands, appears to the best advantage when the length of time to which they have been subjected to an exhausting cultivation, is considered. We will cite a few instances as examples. Mr. F. Renick, a distinguished farmer near Chilicothe, Ohio, has cultivated corn near forty years successively, on his farm, and has obtained an *average* of *sixty bushels* per acre—no manure having ever been applied.

The crop of corn for which the Muskingum Co. (O.) Ag. Society gave the premium last year, was grown by Mr. Hosea Woodruff, near Zanesville. The land on which it grew, had been cultivated without manure, twenty-eight years—twenty-six years of which, it had been in corn. There were fifteen acres in the lot, and Mr. W. had about fifty acres of nearly equal product. The crop was cut and put up in shocks of as nearly equal size as practicable—a portion of the shocks, which it was thought would show about an average of the yield, were husked and measured; and assuming this as an average, the product was *ninety-nine bushels* per acre.

Other instances as remarkable might be given, but these will answer our purpose.

From a cursory glance, the idea might be entertained, that all circumstances most happily conspire to render this, of all other regions, the most desirable to the agriculturist. But by a more minute examination, it will be seen that in this case, as in most others of a similar nature, the advantages and disadvantages are so nicely balanced, as to leave no cause for charging nature with partiality in the bestowment of her favors. As Goldsmith, (with a little variation,) has said,

> ——————— if countries we compare,
> And estimate the blessings which they share;
> Though men may flatter, still shall wisdom find
> An equal portion dealt to all mankind.

The farmers of the fertile region of which we have spoken, are subjected to immense risk and trouble in conveying their produce to market. Their beef is sold "on foot" in the eastern cities—Baltimore, Philadelphia, New-York and Boston—their cattle being thus obliged to perform journeys of from four hundred, to more than a thousand miles in extent. The soil of a very considerable portion of that country, is not suited to the production of wheat; Indian corn being almost the only grain that is cultivated; and the difficulty of transporting this article to a distant market without damage, or without incurring an unwarrantable expense, obliges the farmer to feed it to cattle and hogs, which, with other circumstances, tends to keep beef and pork at a very low price.

But we have thus far spoken only of the *best* soil under good cultivation; and it should by no means be inferred that what we have said of such lands, will apply universally, or even generally, to the western country. It must not be inferred that the soil of the whole of that region, is of such inexhaustible fertility. There are poor lands there, and a very large portion of all, may be said to be of not more than medium quality; yet in the cultivation of the inferior soils, as little attention is generally paid to prevent exhaustion, as with the richest ones. The consequence is, that the older settled portions of the west, exhibit, in too many cases, the most striking evidences of rapid deterioration. We speak more particularly of some of the hilly and wheat-growing districts of Ohio. The most prominent defect in the husbandry, is the too frequent use of the plow, and running the land too much to grain crops, without manure and without the use of clover or grass; by which course the land is much impoverished, and greatly injured by the washing of rains, and by the growth of foul stuff which the slovenly cultivation has permitted to spring up. So bad has been the management, that land which only a very few years ago produced good crops of wheat, now yields only a scanty harvest that scarcely pays for the gathering. But the injury from bad cultivation is not confined to the hills; it is often seen on the level lands and "bottoms." No soil but that of the very richest quality, could be subjected to this devastating course, without exhibiting signs of deterioration.

The system of *renting* which prevails in many districts, is the cause of much bad management. The tenant occupies the land only on an annual lease, perhaps, and the terms are such, as in connexion with the low prices of produce, oblige him to go on the *do-for-the-present-plan;* the *skinning* course is the only one for him. The present crop is the only one thought of. The fields become hemmed in with bushes and brambles; elders and rank weeds gradually get possession of favorable spots in the interior, and they are left to grow and flourish, gaining strength and wider possession every year, because each occupant cannot (or supposes he cannot) afford to eradicate them. Neither are these appearances confined to rented land; they are seen under the management of the owner himself.

As before observed, but little care is used in saving or applying manure; the first settlers appearing, too generally, to have adopted the strange idea, that *all* the land would alike bear continued cropping, without giving to it any return. So common seems to have been this notion, that it is not very unusual to see the stables and hog pens, (where such things as hog pens are used,) placed in situations, where the manure may be got out of the way without the trouble of carting it. For this purpose, they are sometimes placed near steep banks, or over small streams or "*runs*," where as the manure falls, it may be carried off by the water. More than one instance has been seen, where having failed to secure the most *favorable* site, the stable has been actually pulled down and rebuilt in another place, to avoid the inconvenience occasioned by the accumulation of manure! And this too, where the stinted crops showed the most obvious necessity of returning to the impoverished soil some portion of those fertilizing substances of which it had been so unwisely deprived.

In this section of country, as in others where the same wasting course is praticed, the last remedy, the grand escape from all its troubles, is to "sell out" and emigrate to the west, the *west, west*, that *Hesperian Elysium*, which like the beautiful rainbow, recedes as it is approached, leaving its visionary pursuer in disappointment at last. Yet will this *ravaging* population move on, spreading desolation as they go, till having overleaped the Rocky mountains, and being finally checked by the wave of the Pacific, they will probably *weep* that there are "no more worlds to conquer?"

Let not our remarks on this subject be misunderstood. Although the practices we have been here deprecating are far too common, yet examples of good farming may be found in the west, that will bear a comparison with any in other parts of the country. It is only to be regretted that such instances are too rare.

CURE FOR CORNS.—Our correspondent, Mr. John M. Johnson, says corns on the toes may be removed by two or three applications of the *oil of spike*, before going to bed.

COMMON SCHOOL LIBRARIES.

We have received the "Second Annual Report of H. S. Randall, Superintendent of Common Schools of Cortland Co., together with a Special Report on School Libraries; prepared by direction of the Superintendent of Common Schools of the State of New-York;" and have examined it with great interest and satisfaction.

The first part of the Report is devoted to an exposition of the state of schools in Cortland county, and some suggestions as to the best methods of rendering our admirable system still more effective. Mr. R. expresses his conviction "that the condition of the common schools, as well as the standard of teacher's qualifications, is manifestly and steadily improving;" and in this opinion we fully concur. Among the suggestions for the further improvement or advance of the system, is one, that the State Superintendent visit annually, say half of the counties in the State, when a convocation of the teachers of the counties, with drafts from the several schools would be in attendance; an event which would form an incitement and reward to exertion in the scholar, and skill and attention on the part of the teacher. We have no doubt that such a course, if practicable, would be attended with the best results. It certainly deserves consideration.

The second part of the Report, occupying about 30 pages, is devoted to the subject of Common School Libraries, and is evidently the result of much observation and reflection on the workings of this important part of our system. In the language of Col. R., "New-York has the proud honor of being the first government in the world, which has established a free library system adequate to the wants and exigencies of her whole population. It extends its benefits equally to all conditions, and in all local situations. It not only gives profitable employment to the man of leisure, but it passes the threshold of the laborer, offering him amusement and instruction after his daily toil is over, without increasing his fatigues or subtracting from his earnings. It is an interesting reflection that there is no portion of our territory so wild or remote, where man has penetrated, that the library has not peopled the wilderness around him, with the good and wise of this and other ages, who address to him their silent monitions, cultivating and strengthening within him, even amidst his rude pursuits, the principles of humanity and civilization." The importance and certain influence of our School Libraries in giving tone to the moral character of our population, is strongly enforced; and as a necessary consequence, the great care of selection is urged upon those entrusted with this duty. New-York owes much, in our opinion, to the present able State Superintent, for the decided and correct stand he has taken on this subject, for arresting the flood of trash, of "tales of atrocity, seduction, or sickly sentimentality," which was beginning to overflow these repositories of knowledge, and convert what may be one of our greatest blessings, into a source of almost unmixed evil.

The kind of books most suitable for school libraries, their size, useful as distinguished from amusing, juvenile books, moral tendencies, sectarian books and what is to be understood as such, political books, miscellaneous books, &c. &c., are all respectively treated, and in an able manner. On what is usually termed sectarian works, the report is peculiarly lucid and conclusive; and though some may possibly be found to dissent from the conclusions arrived at, they will without doubt, be satisfactory to the great mass of those interested in our school libraries. The same may also be said of his remarks on what are termed political books.

Our acquaintance with the books most read in these libraries, and our knowledge of the class of young persons most likely to be benefited by them, and form their habits and tastes from their perusal, induces us to concur with his remarks made under the head of "juvenile books," to a great extent. The child between six and twelve years, requires a very different class of books from the youth of from twelve to sixteen; but too many of our school libraries, show no recognition of such a distinction; and while mental aliment in abundance is provided for the last class, the first seems to have been almost entirely overlooked. The habit of reading in most children, is acquired early, or not at all; the importance of books that will interest such, is apparent, and we are glad to find Col. R. recommending such books as "Parley's Magazine," and the "Rollo Books," to a prominent place in the school library.

We thank Col. R. for his valuable Report, and hope it will find a place in every school district in the State. For the length of this notice, we offer no apology. The object of the Cultivator is to improve the "Mind" as well as the "Soil," and every thing that has reference to the instruction of the young, is clearly within the scope of our publication, and on account of its intrinsic merits, deserves a prominent place.

STATE PREMIUM ON CORN.

If the reader of the Cultivator will turn to page 53 of the current volume, he will see that in addition to the usual premium for the best corn crop, there are also three premiums of $25, $15 and $10, for the best conducted experiments in the culture of Indian corn; not less than one acre to be experimented upon, and the report to embrace every detail necessary to a full understanding of every part of the proceeding.

When it is recollected that corn is one of the most important crops, if not *the* most important one cultivated in the United States; that there is not one on which good culture and good management produces more magical effects; that there is none in which the plant is more readily improved in productiveness by care and skill; and that all must admit there is a most lamentable want of knowledge among farmers as to the best mode of planting, manuring and cultivation, the importance of these premiums will be found second to none offered by the Society, and we hope will call into requisition the skill of many of our best cultivators.

Every one who enters upon the experiment, will of course choose his own method of operating, but there are some things requisite to the completeness of the experiment, and necessary to be embraced in the reports made, which it may be well enough to mention here.

In the first place, the natural condition of the soil, its geological and mechanical composition, as far as practicable, the previous crops and treatment for two or three years, the preparation for the crop, plowings, harrowings, manurings, &c.

In the second place, the kind of corn used for seed should be fully described; the quantity used per acre stated; the manner of planting, whether in rows, drills, &c.; whether manured in the hill, and what manure used; whether top dressed, and whether the plants were hilled or the surface left level.

In the third place, the treatment of the crop; the number of hoeings; the securing of the crop, whether by cutting up or by topping; the measurement of the crop, whether by weight or by measure, with the cob or shelled, and the time of doing it; in short, every thing that can give an accurate knowledge of the time, labor and expense of producing the crop, or the several parts of it.

It seems to be particularly desirable, and we know it to have been the intention of the proposer of these premiums, that there should be as much diversity of culture introduced into each experiment as possible. That the effect of different methods and distances of planting, of different kinds and quantities of manures, and different modes of application, different modes of culture and curing, and the difference of labor and expense in each case may be known, as compared with the product, and a guide to the operations of the farmer in corn culture be established, so far as such experiments will establish, such variations in each experiment would seem to be proper. We throw out these suggestions at this time, in the hope of calling the attention of farmers to the subject, and inducing if possible, many to enter the list of competitors.

NEW VARIETY OF THE TURNEP.—Mr. Breck, editor of the N. E. Farmer, at a late agricultural meeting at the State-house, Boston, spoke of a new kind of turnep, called the "Early Snow-Ball," which he says is an improvement on the White Dutch, and is decidedly superior to any yet cultivated.

NOTICES OF BOOKS, PAPERS, &c.

FARMER'S ENCYCLOPEDIA and Dictionary of Rural Affairs, by C. W. JOHNSON, Esq. adapted to the United States by G. EMERSON. This work, which has been issued in numbers, is now completed, and is offered for sale at $4. It is an excellent publication, and we trust it will find a ready sale. The American edition has received many additions, which will render the work more valuable than the English edition. It is published by CAREY & HART, Philadelphia.

PRIZE ESSAYS ON MANURES.—We have been furnished copies of Dr. DANA'S Prize Essay on Manures, which was noticed in the last volume of the Cultivator; and the Prize Essay read before the Berkshire Agricultural Society, at its meeting in October, 1843, by ASAHEL FOOTE, Esq.

Of Dr. DANA'S Essay, we can only repeat the commendation of its matter and its manner, we have before given. It is at once scientific and practical; it gives the effect and the cause, and we think no farmer can peruse it without advantage.

Mr. FOOTE'S Essay is a most valuable compilation; well arranged, plain in its statements, and abounding in facts. It shows a close investigation of the subject, and a thorough acquaintance with the best sources of information on this topic; and is alike honorable to the writer and the society that called him out. That these works will have an extensive circulation, and do much towards reforming the erroneous practices too prevalent among farmers, in their preparation and treatment of manures, we cannot doubt.

PROF. LIEBIG'S FAMILIAR LETTERS ON CHEMISTRY.—Mr. Campbell of Philadelphia has furnished us with a copy in a neat pamphlet form, of this late production of Prof. Liebig's; and we should notice it more at length, had not a correspondent in a late number, given an able and satisfactory account of its contents. It contains 16 letters, and consists mainly in a recapitulation of the doctrine advanced by him in his former great works, and an explanation of some points on which he appears to have been misunderstood. They exhibit evident traces of the profound intellect and persevering investigation, which mark his other publications, and which so far as the chemistry of animals and vegetables is concerned, has created a new era in science.

GEOLOGY FOR BEGINNERS, by G. F. RICHARDSON, of the British Museum. Second edition—Longman & Co., London; Wiley & Putnam, New-York. We acknowledge the reception of a copy of this valuable work from the London publishers. It comprises a familiar explanation of Geology and its associate sciences, Mineralogy, Physical Geology, Fossil Conchology, Fossil Botany and Paleontology. As a work for beginners in the study of Geology, it seems admirably adapted. The contents are arranged in so interesting and attractive a light, that when the examination is once commenced, it is sure to be continued. The book is accompanied with a handsome frontispiece, representing the shores of the primeval ocean, when the vegetation of our globe consisted only of those trees and plants, the remains of which are now discovered buried beneath its surface—when the only animals were those of the lowest orders. Reptiles, some of which are of enormous size, are seen in the water and on the land; and some have even the power of flying in the air. We most cordially recommend the work to all who feel interested in such studies.

SIMMONDS' COLONIAL MAGAZINE—*A Journal of Literature, Art, Science, Commerce and Finance.* Edited by P. L. SIMMONDS, London. The principal design of this work seems to be that of giving correct and valuable information relating to the colonies of Great Britain; but it also collects and disseminates much useful intelligence on the commercial and political relations of the world in general. Judging from the two numbers before us, and from the acknowledged ability of Mr. Simmonds to conduct such a work, we have no doubt it will prove highly interesting. Among the contents of the numbers received, are the following articles:—Navies of the world—Original Treatise on the cultivation of the Sugar Cane—Notes of a residence in Van Dieman's Land in 1842-3—Recollections of Algeria in 1843, with illustrations—The Oregon Question—Culture of Cotton in Jamaica—State Affairs in New Zealand—Bituminous lakes in Texas, &c.

"THE FARMER'S MINE."—Mr. Heermance, the author of this work, writes us that our "notice of it last fall, has done and is still doing him great injury." He says:—"Among other things, I am charged with the grossest plagiarism." In this he thinks we have done him injustice, inasmuch as he says in his preface,—"In the following compilation, I have selected largely from the Farm House of the 19th century, also from Dana, Gaylord, Liebig," &c. This general acknowledgment, however, in our opinion forms no excuse for the manner in which this book is got up. Parts of it are *credited* in the body of the work to the several authors alluded to, while other and *much larger* portions are given as apparently original. For instance, the "Introduction," occupying six pages, appears as original—at least as much so as any other part of the book—whereas it is copied word for word, with the exception of eight lines, from the Prize Essay of Mr. Gaylord. The title-page says the work contains "much new and important information on the subject of manure," and the person by whom it was "revised and corrected," says that is "one of the most valuable works on manures which has been issued from the press for a long time"—and that the author "has been some time a practical and scientific agriculturist," and "recommends nothing, the value of which he has not himself tested." We shall be greatly obliged if the author or revisor will inform us how we are to distinguish between the *original* and *selected* portions of the work, that we may know what part of it contains the results of Mr. Heermance's experience.

THE CENTRAL N. Y. FARMER.—At the commencement of the present year, this paper, published at Rome, appeared in a new form and new typographical dress—a very decided improvement both in form and appearance. It is edited by C. N. BEMENT, B. P. JOHNSON (Cor. Sec. of the State Ag. Society,) and E. COMSTOCK—all well qualified to make—as they do—an excellent paper. Monthly, at 50 cents a year.

NEW GENESEE FARMER, edited by M. B. BATEHAM, Dr. D. LEE, and T. C. PETERS. Published monthly at Rochester, at 50 cents per annum, in advance. It is only necessary to announce the names of the editors, to show that it is conducted with skill and ability.

THE PRAIRIE FARMER.—This excellent and well filled sheet, commenced its 4th volume with the present year. It is edited by J. S. WRIGHT and J. A. WIGHT, and is one of the very best of our agricultural periodicals, being ably conducted, with a large list of contributors, and beautifully printed. Monthly, at $1 a year. It will give us much pleasure to order it for any of our friends, who may wish to know what is doing in the prairie country. Published at Chicago.

WESTERN FARMER AND GARDENER.—This work, commenced by Mr. E. J. HOOPER, and afterwards managed by Messrs. AFFLECK and FOSTER, has now passed into the hands of Mr. HOOPER (its former editor,) and Mr. CHAS. W. ELLIOTT. It has lately assumed more of a horticultural character, and in this capacity, as well as that of an agricultural journal, we are satisfied it will prove eminently useful to the west. Each number contains one or more copper-plate engravings of fruits, by Mr. Foster, which are generally exceedingly well executed. We sincerely recommend the work as worthy the patronage of the western farmers and gardeners. It is published monthly at Cincinnati, at $1 per annum.

THE WESTERN CULTIVATOR.—A dollar monthly commenced at Indianapolis in January, by W. T. HATCH. Well edited, and handsomely printed.

BRITISH AMERICAN CULTIVATOR.—This is a spiritedly conducted agricultural paper, which has now reached its third volume, published at Toronto, U. C. It is issued monthly, in a quarto form, with 16 pages, at a dollar a year in advance. Edited and published by W. G. EDMUNDSON.

CANADIAN AGRICULTURAL JOURNAL.—We have received the first three numbers of this paper, lately commen-

ced at Montreal, L. C., edited by WILLIAM EVANS. This is an octavo of 16 pages, well filled. It appears to be well deserving of patronage. Terms, one dollar a year in advance.

MEDICO-CHIRURGICAL REVIEW.—This is a work which deserves extensive patronage, as its contents cannot fail to be interesting and useful to all who have the opportunity of perusing them. Among the numerous articles in the Jan. number, we have been particularly interested, (as pertaining more to our vocation,) with the notice of Lectures on Comparative Anatomy and Physiology of the Invertebrate Animals—Physiological Anatomy and Physiology of Man—Glanders and Farcy in Horses and in Man, from the Veterinarian—remarks of M. Dumas on the Fattening of Cattle, &c. &c. This Review is published quarterly, by R. & G. S. Wood, New-York, at $5 per annum.

DEATH OF HENRY D. GROVE.

Soon after our last number went to press, the news of the death of our much respected friend, H. D. GROVE, Esq., reached us. With the general and unfeigned regret which is felt in view of this event, we most sincerely sympathise. At our request, a friend has furnished us the following obituary:

Died, at his residence in Hoosick, Rensselaer co., N. Y., on the 22d of February, HENRY D. GROVE, Esq., aged 40 years. He was a native of Germany. Possessing a spirit of enterprise, and a soul uneasy under the arbitrary restraints of European government, he early in life sought relief therefrom by emigrating to this country, about eighteen years since. He soon made himself familiar with the language and character of our people. By his correct deportment, his intelligence and enterprise, he commended himself to an extensive acquaintance of admiring friends. The respect which he commanded, arose not from adventitious circumstances. His was not the reflected light of a "long and illustrious line," grown dim in its passage down the vista of time; but it was txe clear, transparent ray which emanates only from true genius and real worth. With a mind possessed of an unusual share of intelligence, generous and refined in his taste and feelings, honourable in his intercourse, pleasing in his person and commanding in his address, he belonged indeed to "nature's nobility." Mr. Grove was an enlightened agriculturist; theoretic without being visionary, and practical without rejecting the improvements and advantages derived from a proper application of science, he contributed much to its advancement within the sphere of his influence. He was particularly devoted to sheep husbandry, and has rendered a valuable service to this country, by disseminating knowledge in the management of flocks. He was the first and principal importer of the Escurial Saxony sheep, which have contributed so much to improve the quality of the American fleece, and consequently elevate the character of our woolen fabrics. He was one of the pioneers, the founders of our State Agricultural Society, and has continued one of its most useful and efficient friends. The county in which he resided, the neighborhood where he lived, will long have cause to regret his loss. Popular education, and indeed most of the benevolent enterprises of the day, have lost in him a warm advocate, a patron and friend. In the social circle, he was highly esteemed; and in domestic life, he sustained fully the responsibilities of those tender relations. But he is gone. The angel of death, with an aim,

"Sure and steady as the eye of destiny,"

has made him her own. No more shall we hear his merry laugh; no more be greeted by his happy salutations. He fell suddenly; in the meridian of life, in the full vigor of manhood, in the midst of his usefulness, was he stricken down. He fell in a land of strangers, far, far from his kindred and his native home. Yet he went down to the grave followed by an unusual concourse of friends; with a reputation unspotted, and a character untarnished. Honored and esteemed in life, he will be deeply lamented and mourned in death. His memory will inherit a "green old age," bedewed by the tears of an afflicted family, and an extensive circle of friends.

SUMMER WHEAT.

There are large sections of our country in which, owing to the character of the soil, or a defect in its preparation, winter sown grain does not usually succeed: and the chances of failure from freezing out is so great as to render the attempt of fall sowing wheat, of doubtful propriety. In all such places, the culture of spring wheat is of the first importance, and fortunately, when conducted in a proper manner, rarely fails of a handsome remuneration for the labor of the farmer; and even where winter wheat succeeds well, circumstances may render it desirable to grow more grain than can be sown in the fall, when a few acres in summer wheat will prove a profitable crop.

Spring wheat requires that the soil should be in good condition, clean or free from weeds, and hence succeeds generally better after root or hoed crops, than on freshly manured lands. Recent manuring, unless with thoroughly decomposed matters or compost, is injurious, as giving too rank a growth to the straw, causing it to lodge or fall, and preventing the filling of the kernel. We have rarely found summer wheat to fail of a good crop, sown after potatoes or corn, to which manure had been liberally applied. We have also grown fine crops of this grain on sward lands or clover lays, turned in the fall, rolled closely, and allowed to pulverize by the winter's frost. We prefer fall, to spring plowing in this case, as, unless extraordinary matters forbid, land can rarely be turned and fitted for sowing, as early as this grain should be put in the ground.

In our culture of this crop, we have succeeded best with grain sown early. It has rarely failed, thus put in; it gets its growth before the intense heats of summer come on; it is not so liable to fall, and what is of still more consequence, the berry will be fuller and heavier, and the yield greater than if the sowing was longer delayed. Where the wheat worm has infested this crop, very early or very late sowing, has been found one of the most effectual preventives. Sown before the middle of April, or after the middle of May, the grain generally escapes; in the former case, the insect not appearing until the proper state of the grain for the deposition of the egg has passed; and in the latter case, the period of the insect has usually passed before the grain comes to the stage in which it suffers most from the fly.

Few crops are benefitted more by change or choice of seed than this; but whatever may be the kind of seed, it should never be sown without a thorough preparation. Soaking in brine, carefully skimming it during the process, and then drying in caustic or new slaked lime, has with us proved the best course of treatment. These salts not only contribute to giving the plants a vigorous and healthy start, but tend to keep it free from smut; a disease to which this grain is liable. Summer wheat will not make superfine flour, it having a slightly yellow cast, but it makes superior bread, containing a large portion of gluten, and sufficiently white for all useful purposes. On favorable soils, the yield is from twenty to thirty bushels per acre.

DEATH.—Died in this city on the 8th of March, of consumption, Mrs. MARY S. TUCKER, wife of the proprietor of this paper, and daughter of the late Eebenezer Sparhawk, Esq. of Rochester, Vermont, aged 38 years. Her life was a beautiful exhibition of the principles of the Gospel, and her death, that of the firm consistent christian, peaceful and happy.

INFORMATION WANTED.

DRILL BARROW.—I observe in the second volume of the Transactions of the N. Y. State Ag. Society, a notice of a drilling machine invented by Jonathan Battey, of Peru, Clinton Co., of uncommon excellence. Will the inventor favor the readers of the Cultivator, with a description? Much difficulty has been experienced in procuring such as are adapted to sowing beet seed, and a description of J. Battey's machine would doubtless be of value to many. J. J. T.

MANURES.

"GENTLEMEN—Will you through the medium of your valuable paper be so kind as to reply to the following queries:

1. When stable manure is not to be had, what is the best substance to mix with swamp muck, so as to make it profitable as a manure ?

2. Will lime without any thing else answer the purpose?

3. Are ashes better than lime ? or would ashes and lime mixed together be better than either of them separate ?

4. Would salt be of any use ?

Essex Co., N. J. T. C."

Experience as well as chemical analysis, seems to have determined that for the conversion of peat or swamp muck into manure, there is nothing, after stable manure, within the farmer's reach equal to ashes. If the ashes are unleached four or five bushels, and if leached about double the quantity, are sufficient for a common load, or two-thirds of a cord of muck. If the muck has been exposed to the action of the air, so as to be in a fine, or decomposed state, these materials may be thoroughly worked together, and used at once for a crop. But if the muck is clearly undecomposed, or contains much vegetable fibre, the mixture of ashes with it should take place some time before using. There can be no doubt of the great value of this compost; and it is prepared so easily, that it is a matter of surprise it is not more extensively used.

Lime, alone, has been used as part of such a compost, and in some instances with success. The case of Mr. Benedict, of Pittsfield, Mass., is of this kind. His compost heap was made in the fall of swamp muck and lime, a bushel of lime to a load of muck, as it came from the bed, and well mixed. In the spring, he manured part of his corn-field with this compost, a shovel full in a hill, and the remainder in the same way with manure from the stable. The whole crop was a fine one, the compost fully equalling the manure. We, however, should have more faith in the ashes than in the lime; perhaps because we have tried the first, but not the last.

We do not know that any particutar advantage could be gained by mixing ashes and lime together; but the experiment might be easily made where both materials were at command.

We question whether salt would be of essential use alone in forming such a compost, but if used in the manner recommended by Dr. Dana, it would doubtless be an important auxiliary. He recommends to saturate water with a bushel of salt, and with that slack a barrel of lime. After the lime has lain ten or twelve days mix it thoroughly with three cords of muck or peat. The mass is to be turned with the shovel occasionally for five or six weeks, when it may be applied to the soil. Mixed with lime in this way, chemical changes take place, which give a value to both the salt and the lime they could not before possess.

But the man who has a supply of swamp muck, has the means of restoring fertility to his soil, even if he has no ashes, stable manure, or lime. He has but to draw and spread it, or pile it up in heaps where wanted, and the action of the atmosphere will do much towards converting it into manure. If he has yards or pens, let a large supply of it be kept in those places, to receive the urine and wash of his yard, or to let his pigs operate upon, and he will find his and their labor well bestowed.

☞ Our good friend "P." of the Southwestern Farmer, need give himself no uneasiness about the subscription to the Cultivator. If it is not "killed" till it has "less than 3000 to 5,000 subscribers," it is likely to live to a good old age. P.'s insinuations and presumptions are alike unjust. The sales of the Cultivator have at no time been less than 12,000 vols. per year, and he will doubtless be glad to learn that it will probably much exceed that number this year.

APPLICATION OF MARL.

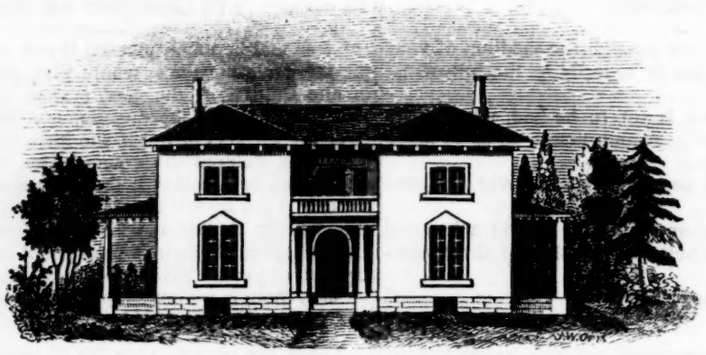
"I should be much pleased if you or some of your numerous correspondents, would give through the columns of the Cultivator, the best system of managing marl; whether it should be dug out and spread immediately over the surface, or put in the hills or drills; whether it should be suffered to lie some time in heaps after it is hauled up, or whether it should be mixed with other manures? I am myself at a loss on these points; also as to the quantity that should be spread over an acre. I believe shell marl abounds throughout this region of country, but as yet we have scarcely attempted to raise it from its bed, though we contemplate soon making a trial of it.

Eufalla, Alabama, 1844. A. M'D."

There are several varieties of marl used for the improvement of land; but the principal distinction is the one existing between the shell or calcareous marl, and that which contains the green sand. The former is the proper marl, and owes its value principally to the lime it contains, and this varies from twenty to sixty per cent. The green sand marl, which is the kind so common in New-Jersey, and which has so much increased the value and productiveness of the light sandy soils of that State, is supposed to owe its value principally to the potash it contains; this substance in some specimens reaching twelve per cent. The two kinds are sometimes found intermixed, both in New-Jersey and in Virginia, and doubtless farther south, where the same formation prevails. The highest authority on the subject of marl, is Mr. Ruffin; and the volume that records his experiments on this and other calcareous manures, is one of the most valuable contributions yet made to our agricultural literature; and should be consulted by all who are intending to use this important auxiliary in improving the soil.

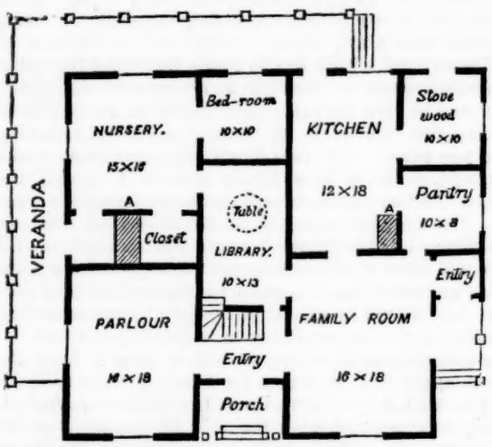
The best method of using marl is to take it from the bed, and apply it at once as a topdressing to the soil. It should be spread as evenly as possible, made fine, and effectually incorporated with the soil by the plow or the harrow, or both. Marls differ in the quantity of clay or sand combined with the calcareous part of the marl; and hence the best marl for light soils, the calcareous part being equal, will be that which contains the most clay; and for clay soils, that which contains the most sand. Marl should not be used in the hill or in drills, as are animal or vegetable manures; since if used in this way it would in most cases be productive of more injury than benefit to the crop, the first one at least. There can be no doubt that a top dressing of this substance would be more effectual, if mixed with a considerable quantity of common manure, but this is rarely done, the marling being first perfomed, and the manure applied in the subsequent years. The quantity necessary or proper, will depend on the quality of the marl itself, or the nature of the soil to which it is applied. In New Jersey the quantity used varies from six to ten tons, of twenty bushels each, per acre. It is applied to grass lands, and as a preparation for crops of all kinds; and in some cases the effect is almost marvellous. Mr. Ruffin found from many experiments that calcareous marl containing from 45 to 50 per cent of lime, succeeded best when about 200 bushels per acre was used. Applied at the rate of five or six hundred bushels per acre it proved injurious for a year or two, or until a dressing of animal manure was given. It is probable, therefore, that our correspondent will find it safe to use from 150 to 200 bushels per acre, spread over the surface and thoroughly incorporated. The presence of such immense quantities of marl immediately beneath the light sands of so large a part of our country, where it is so much needed, is a matter important to the planter, and should not be allowed to pass without being improved for the benefit of his crops.

INQUIRY ABOUT WOOL.—We would refer our correspondent R. M. to the remarks of Mr. Lawrence and Mr. Jarvis, in this number. He will there see that the best wool does not come from poor, starved sheep, as some have supposed. It seems necessary that sheep should be well kept to give strength and elasticity to the wool; though it is not necessary that they should be actually *fat*



DESIGN FOR A FARM HOUSE AND OUT-BUILDINGS—(Fig. 34.)

BY JOHN J. THOMAS, MACEDON, N. Y.

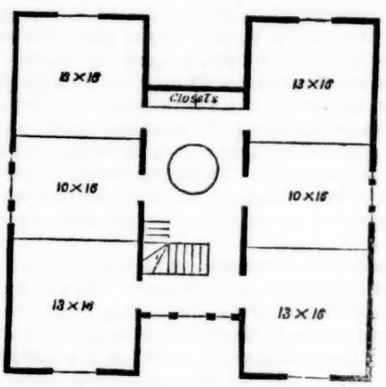


Ground Plan—(Fig. 35)—Scale, about 20 feet to an inch.

Figures 34, 35, 36, represent the farm house—fig. 34 the elevation, partaking of the Italian style—fig. 35, the ground plan, and fig. 36, plan of the second floor. A form nearly square is given to the building, for the sake of economy, requiring far less external covering for the space enclosed; at the same time the outline is somewhat broken, to prevent heaviness and monotony of expression. About half is surrounded with a veranda, under which lathing and plastering may take the place of clapboards, and thus save expense. The whole building may be considered as composed of two parts or wings, extending from front to back, the ridge of their roofs also in the same direction, connected by a center building with the roof at right angles to the two former. The two wings are chiefly occupied as parlor and family room in front, and kitchen and nursery back; and the center part as a library, (for books, minerals, maps, astronomical diagrams, &c.,) lighted by a sky-light in the roof, through a circular opening, surrounded by a railing, in the second floor. This opening will admit of thorough ventilation of the adjacent rooms below, if desired, or it may be closed by a sash of glass, the light softened by a translucent varnish. The kitchen is lighted with one very broad window. A. A. are chimneys, and admit of open fireplaces for the parlor, nursery, kitchen and family room. If a hot air furnace is used, by placing it under the center of the library, the heated air may be easily conducted to all the rooms above. The nursery entry opens on the large veranda, enabling children to take fresh air in all weathers. A back entrance to the parlor may be easily made from the same entry if wished. The bed-room adjoining the nursery, is covered with a lower roof, separate from the rest of the roof, and corresponds with the roof of the porch.

The eaves are 5 feet above the second floor; and 4 feet additional rise in the roof gives ample height for the upper rooms, which may be six in number, and allow sufficient space for closets.

The dairy should occupy the coolest part of the cellar, and be entirely separated from other parts by walls. The



Second Floor—(Fig. 36.)

best and cheapest material for the floor, is a coating of two inches of water lime mortar.

The size of this house will appear too large to many, but it is not larger than the houses of a large portion of our farmers, after piecing and patching; costs much less, and appears far better. It is much easier to pass from one room to another on the same level, than to pass a flight of stairs; hence the aim has been to have as many of those in common use on the same floor. This also contributes to economy in erection—as calculation will readily show. A one story house, 10 feet high and 40 feet square, will enclose 1600 feet of floor; a two story house, 28½ feet square and 20 feet high, will also enclose 1600 feet; but the latter will require 650 feet more of siding, which will cost more, with painting, than the addition in shingling the former.

A careful and liberal estimate, made from full bills of cost of several houses actually erected by the writer, places the cost of this building, if made plain and of wood, at about $1,400, at the average price of materials, teaming, labor, &c., in central and western New-York. This cheapness is owing principally to the cottage form, compact arrangement, and the diminution of siding and paint under the veranda.

Figure 37, is an elevation of the farmery, and fig. 38 is a plan of the farmery, house, and adjacent grounds. The farm buildings form nearly a hollow square, the barn in the center of the further range. In fig. 37, the barn cellar only is shown, being on a level with the stables on each side. The further part for roots, and is filled through two windows with hopper-like troughs, into which the cart is dumped. The nearer part is for straw, to be used for cutting and for littering. From the intermediate space, passages 4 feet wide run in front of the stables on either side, for feeding. Fig. 39, shows the upper floor of the barn; A. unthreshed grain; R. corn crib; C. granary, the bin for oats with an opening below for feeding horses; this opening closed by a sliding board. A door opens from each of the last, to facilitate loading

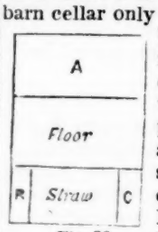
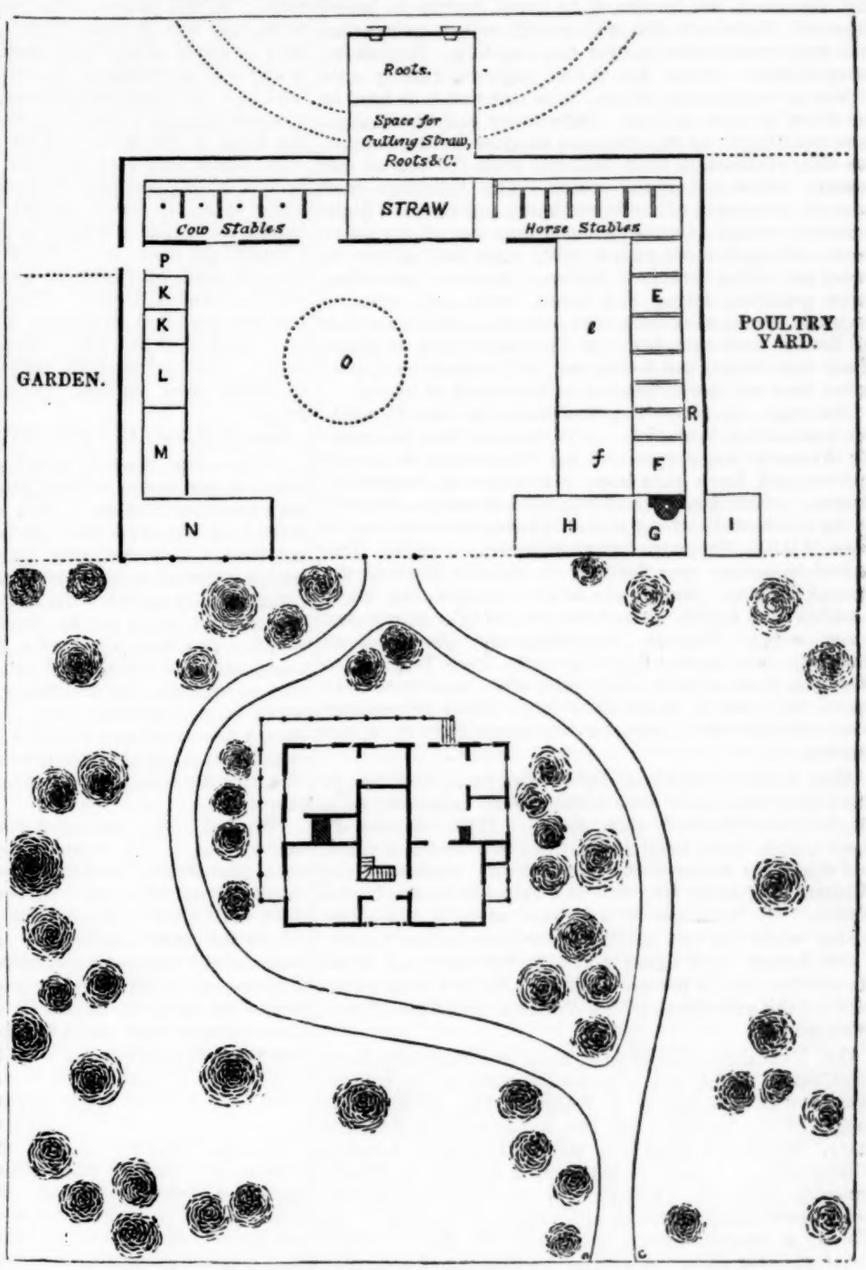


Fig. 39.

Elevation of the Farmery—(Fig. 37.)



Plan of Farmery, House and Grounds—(Fig. 38)—Scale about 40 feet to 1 inch.

of wagons from them in the yard below; the bay for straw extends upwards as high as the top of the granary, over which a floor is placed for holding unthreshed grain above. The dotted lines show the wagon way for entering and passing from the barn floor. This way should be wide enough on one side to place the horse power of a threshing machine. A band may extend from this horse power through a hole in the floor, and drive the straw-cutter, root-slicer, &c., below. The hay for horses and cows, is kept in the loft over the stables, from which it is conveniently thrown down into the passage in front of the animals. E. shed for sheep, with racks at right angles to the passage R., from which they are filled with hay thrown down from above; *e*, sheep yard; F. piggery; *f*, pig yard; G. room for boiling roots; I. poultry house; P. passage from manure yard *o*. to back part of farm. K. K. calf house; L. work shop; M. house for plows, harrows, horse rakes, rollers, &c.; N. wagon shed. H. house for keeping store wood during seasoning, wood seasoned two or three years being much better than for a shorter period; and a rough boarded outbuilding, being also cheaper than a well finished painted one in contact with the house. The manure yard *o*. should be about two feet below the surrounding buildings, to which the cleanings of the stables are to be taken daily in a large boxed wheel-barrow, and straw and marsh muck supplied as needed. The yard should be well supplied with water, as convenience may dictate. Ventilators, made of square board tubes, should be placed over the stables and run up through the roof.

This plan may be changed without altering the general arrangement, so as to contain more or less grain, more or less hay, stable room, &c., according to circumstances. The hollow square affords shelter to the yard from wind, an important consideration for our climate. The extent and expense of the buildings, are not greater than are often seen, when convenience of arrangement is entirely set aside; and the labor of preparing food and feeding animals, double what it should be. The wings, sheds, poultry yard, garden, &c. may be reversed, according to aspect and exposure to winds.

Louisiana State Fair.—We acknowledge the reception of a copy of the address delivered before the Agriculturists and Mechanics' Association of Louisiana, on the 8th of January last, by the Hon. T. H. McCaleb, together with a full report of the doings of the Association on that occasion. We should be pleased to give a more lengthened notice of all these matters at some more favorable opportunity. We are glad to see the spirit of improvement which seems to be awakening in that section of country. The ladies, in particular, we rejoice to see, are engaged in the work with animated zeal, and whatever they undertake in earnest, *must* go.

HORSES FOR THE ROAD.

MESSRS. GAYLORD & TUCKER—But little is said in any of our agricultural journals, and less done by the farmers of New-England, and I believe of many other States, to improve the breed of horses; less than has been done to improve any other of our domestic animals.

The horse, standing as he does at the head of all our domestic animals, should not thus be neglected. It is for the interest of the farmer, if he breed horses, to breed those and those only that will readily sell at prices that will fully remunerate him for the breeding. It costs no more to raise a horse that at four years old readily sells at one to two hundred dollars, than one that it is hard to get rid of at forty dollars. Experience and observation have convinced *me* that this can be done by the use and use only of *thorough* bred stallions with the best of our country mares and grade mares. The thorough bred horse is possessed of sufficient bone, and that of flinty hardness, muscle of more firmness than that of any other horse—his gait more elastic, with wind and bottom to excel any other breed of horses. Stallions possessing these qualities, rising 15½ hands, with good country or grade mares, ever have and ever will produce a race of horses well calculated for the coach, road or plow. They walk faster, trot faster, and will endure hard labor better than any horse destitute of this strain of blood.

Messenger, by *Mambrino*, was imported into Pennsylvania about the year 1795. His location was favorable for the use of country mares; his descendants were numerous, and have ever been celebrated as the best of horses. *Mambrino*, a son of imported *Messenger*, the sire of the celebrated trotting horse *Abdalla*, has added to the fame of the "*Messenger breed*" of horses, so called. Imported *Messenger* was the sire of Miller's *Damsel*, the dam of *Eclipse*. *Duroc*, the sire of Eclipse, left many valuable and highly prized horses out of country and grade mares. *Bajazet*, *Bucephalus* and *Obscurity*, all thorough bred horses, were brought from Virginia to Hartford, from 1790 to 1794; they were used to country mares only, and at moderate prices. Their descendants were as celebrated here, as Messenger's were where known.

King William, *Matchem*, *Guido*, *Benjamin*, and two or three more thorough bred horses, were imported from England into Hartford, about the year 1798. Several of these horses were kept in Hartford two or three years, and stood for mares at five guineas the season. King William left many very fine and valuable horses in this county. By him, out of a Bajazet mare, I had a colt which made the best gelding ever bred in the county. These horses were finally taken to Vermont and New-Hampshire, and to the use of them, I believe is to be attributed the excellence of the Vermont and New-Hampshire horses.

Col. Talmadge of Litchfield, had a thorough bred horse *Highlander*, which was of immense value to that county. *Roman* was imported by S. Williams, Esq. of Northborough, Mass.; by him I had two fillies out of a Vermont mare, which at 4 years old, were worth three hundred dollars each. A pair of mares by him, sold in Massachusetts, when six years old, for one thousand dollars; and I knew many others by him nearly as valuable. *Sir Harry*, a thorough-bred, was kept in this vicinity, about the year 1830. A gelding by him out of a country mare, was sold at 4 years old for two hundred dollars, and a mare at 10 years old for one hundred and twenty-five dollars; and the same country mare produced four other colts, by horses of *domestic manufactured* pedigrees, which were sold at forty to seventy dollars each, at four to six years old.

A friend of mine had a Naragansett mare, which produced a foal by *Moses*, a thorough bred horse, that proved to be worth double to two other foals she had from other horses. Mr. Samuel Wolcott of this town, well known as the most judicious and successful breeder of cattle we ever had in Connecticut, also bred horses. He bred principally by thorough-bred stallions to his grade mares; and now many well recollect the valuable horses he bred, and particularly a carriage horse and a saddle horse he left on his farm at his decease in 1813.

One of Gen. Eaton's *Barbs*, stood two or three years in this vicinity. It cannot be said we received any benefit by that cross. *Winter Arabian*, was for a time kept in Kentucky, and then in Virginia. In 1832, I had him—he never produced a valuable foal either from blood or country mares.

Bellfounder, imported by Mr. Boott of Boston, stood several years at the farm of Mr. Jaques, was a Norfolk trotter, a descendant on the side of his sire of the *Fireaways*. At five years old he trotted two miles in six minutes, and was 15 hands high. Of his get, I have never seen or heard of any of extraordinary speed or bottom, or in any way particularly valuable for stallions. A Cleaveland bay, imported and kept near Baltimore, was the sire of some fine and valuable horses out of blood mares. At the farm of the Hon. Charles Carroll at Carrolton, in 1826, I saw two very superior young stallions produced by this union; and had they been geldings, would have made splendid coach horses. Had I thorough-bred mares, more than I wished to propagate race nags from, I should put them to a Cleaveland bay stallion. A stallion and mare of this breed were imported into Massachusetts by Admiral Coffin. This horse was inferior to the one imported into Baltimore, and I never could learn he was the sire of any very valuable horses from country mares. Had I Canadian mares, I think by the use of a thorough bred stallion, I could breed from them at a profit. HENRY WATSON.

East Windsor, Ct., Feb. 1844.

NOTE.—Mr. Watson remarks that he has never seen or heard of any horses of Bellfounder's get, "of extraordinary speed or bottom." We have seen several which were certainly remarkable in this respect. We distinctly recollect a roan colt (the owner's name is forgotten,) which attracted much attention at one of the Brighton (Mass.) cattle shows. Dr. Nourse of Hallowell, Me., had a horse and mare got by Bellfounder, of extraordinary speed. The man who broke this mare, (a great horseman,) said that her *natural* gait was a mile in three minutes or less, and that she would do this under a tight rein, while he was breaking her! The Messrs. Allen of Buffalo, a few years ago owned a horse of Bellfounder's get, which has since obtained considerable celebrity in Ohio. We dare say Col. Jaques can tell us of others equally celebrated.

Admiral Coffin presented two Cleaveland bay horses and a mare, to the Mass. Ag. Society. The first horse sent, *(Sir Isaac,)* was not a handsome animal, and we think did not turn out very well. The next one came over with the two race horses, which were also presented by the same gentleman. This last Cleaveland bay was a noble horse in appearance. We should be glad if Col. Jaques or some other gentleman in Massachusetts, would inform us in regard to the progeny of these horses—whether they were considered an improvement in any way, &c.—EDS.

HAY MAKING.

MESSRS. EDITORS—I have seen it recommended from time to time in your excellent paper, to *salt* hay, as a remedy for imperfect curing. Having tried this method occasionally, and observed its effects with some care, I am led to doubt its utility. My objections are two, viz that it is not so nutritious as when well cured; and that it causes cattle to *scour*. My desire in stating these objections, is to call forth further information on the subject. The temptation is very great, when hay is nearly dried, to flatter ourselves that it will keep, especially if well salted, and in it goes. The same state of things occurs the next day perhaps, and temptation once yielded to, in this as in other things, soon becomes a habit; and in unfavorable seasons particularly, our barns are filled with hay, which on feeding out, salt notwithstanding, proves musty and unpalatable. As we open these musty mows, and see our cattle poke over and snuff at the hay, we promise ourselves perhaps, not to do so again; but the next season the same thing is enacted, and so on through a man's life.

This town is somewhat celebrated in this region for good hay and fine cattle. Our *best* farmers can hardly be

tempted to put a lock of hay into their barns until perfectly cured. There are those among us however, who are not so particular. A peep into the yards of the two classes, would, I should think, satisfy any one, whether *perfect* or *imperfect* curing is best. *Salt* is good, in a trough or manger where cattle can help themselves; but it will not, as I think, make badly cured hay *good*, and well cured hay does not need it.

Whilst on the subject of hay, I will say a few words more. The practice of leaving uncured hay until near night before it is cocked, is a bad one. It should invariably be put up by 4 o'clock, at which time the dew begins to collect. When thus put up, it cures rapidly in the cock, requires less handling afterwards, and loses less in weight, than if put up when cold and wet with dew.

The horse rake has recently been introduced among us with good results, enabling one man with a horse to do the work of five or six with small rakes. We have also a broad hand rake for cleaning after cocks and raking after cart, with which one man can do as much as two with small rakes, and with less fatigue. With these and other improvements, hay is now got in, *well cured*, at $1,75 to $2,25 per ton. A few years ago the cost was estimated at $3 to $4 per ton.

As this is my first, and may be my last communication to the Cultivator, I must say a word about Devon cattle. We have made something of an experiment with Durhams; and the prevailing opinion is, that taking into consideration milking, fattening and working, our old stock is preferable. This old, or as we call it, *native* stock, came undoubtedly originally from Devonshire and the adjoining counties of Somersetshire and Gloucestershire, where the Devon breed prevails. Great numbers of our ancestors came from those counties. The breed has been greatly improved in England within thirty or forty years; while with us, no care whatever has been taken, either to keep it distinct or to improve it. It is surprising, however, after so many generations, how plainly the distinctive marks of the Devon can yet be traced, notwithstanding so many crosses and so much neglect. We want now a new infusion of the original blood. Many of your readers here, would be gratified with particulars of the present state of the breed, and also where they can be obtained in this country. RICHARD COWLES.

Farmington, Conn. Jan. 9, 1844.

MORE ABOUT TURKIES.

MESSRS. GAYLORD & TUCKER—I intended to have written out, somewhat in detail, my views upon the subject of raising turkies, but have delayed until I am inclined to omit it altogether. Something however seems to be required from me, in justice to a correspondent in your December number; and I will therefore, even at this late day, proceed to spread before your readers, a few thoughts which may be of service to some who would like to cultivate a better acquaintance with this noble bird. Many persons who have practiced raising turkies for years, still think that success depends very much in "luck." Let me say then in the outset, that in my opinion, this is a great mistake. He who trusts to luck in this business, will be quite sure to meet with disappointment. Turkies, when left to themselves, to seek their place for a nest, hatch out their brood, and wander about with their young, are not very likely to be "lucky." Chance may lead some "old fox," or other lover of good things, to pass by the nest where the old turkey sits, and her escape in such a case, would be luck indeed.

My first experiments with the turkey were unsuccessful; and most of my good neighbors, when they heard of my failures, were prompt to exclaim, "we told you so." But the loss of all my eggs the first year, and little better the next, did not convince me that turkies could not be raised. I have this year raised eighty-six, and feel quite sure, I could raise two hundred another with little difficulty. For two or three years past, I have succeeded so well, I feel some confidence in saying that others will run no great risk in adopting my plan.

He who would succeed well in this business, must, during the winter, feed his flock well, and *familiarly*. By the middle of March or first of April, they will probably commence laying. If they are quite tame, as they can be made to be, they will be likely, if left to run at large, to lay about the house or barn; but the safest way is to drive them into some shed every morning, and let them out about noon. They will then lay in the corners of the room; and when they come to set, they will be convenient to be taken care of, and by closing the door at night, they are secure from harm. After some three or four, or more, commence setting, others may be shut in a different place. I usually take the eggs from the nest as they are laid. A turkey will cover from seventeen to twenty-one eggs. I last season, set three turkies with twenty-one eggs each, and they hatched sixty. One of them hatched every egg. These were in one room. I never feed the turkey on the nest, and I am decidedly opposed to the practice of so feeding them. It is well enough to place feed where they will find it; but if the turkies are hardy and in good condition, this is not very necessary. Most turkies are good setters, and such will commence hatching in twenty-eight days. They should be left upon the nest until the young are dry and able to stand. The hen may then be put into a coop in a warm, dry place, and the chicks permitted to run out, *but should not be fed for twenty-four hours*, or even a longer period. I am very particular on this point, as I think many young turkies are destroyed by over feeding soon after they are hatched. After the first day, a little curd or boiled egg may be scattered upon a board or flat stone. If the weather is cold or wet, it is well to season their food with pepper. I have experimented with giving young turkies feed *very highly peppered*, and have never seen any bad effects, and have frequently noticed cases where I was quite sure the use of it had produced much good. Very little if any Indian meal, should be given. If used, it should be wet up some hours before being fed out. I will not tax your columns with prescriptions for the cure of the different "evils" which young turkies are "heir to." A *sick* chicken is worth nothing; and my experiments with such, have been of the bold kind, upon the "kill or cure" principle; and I have sometimes effected astonishing cures. But it can be of little practical use to your readers, to give a full statement on this head. "An ounce of preventive, is better than a pound of cure." After the first two or three weeks, it is well to let the old turkey out some four or five hours each *pleasant* day, if you have a pasture or other suitable grounds. There is much danger, however, in leaving them out over night, as they are disposed to wander about while the dew is on.

There is a diversity of opinions as to the best variety of the turkey. Some preferring the pure white, others the black; and some there are, if we are to judge by their practice, who prefer every mixture of color, "ring streaked and speckled." I go for the native color. My flock at the commencement of last season, consisted of a turkey cock, the first generation from the wild state; the color and shape exactly agreeing with the wild turkey; and eight hen turkeys of my own raising. The hens are of a dark color, yet not black, with an inclination to white at the end of the wings. A very large share of those raised the last season, were in color and form like the cock, with less of the flesh color on the legs. I would give a more full account of my flock as it appeared in the fall, before I made inroads upon it; and a more full description of the color and brilliant plumage of many turkies now on hand, but fear your readers would think me drawing from fancy.

My opinions and recommendations thus briefly stated, are based upon experiments of my own, and differ in some particulars from writers upon the subject. "Boswell," for example, advises "the putting two or three eggs of the common fowl, under each turkey, that the common chicks may set an example for the turkey chickens, and which determines them to eat sooner than they otherwise do." Now this is all moonshine. Young turkies are more in danger of eating too much than too little; and I would again caution all who would hope for success, not to feed high the first week or two. Feed often, but sparingly. If during the first four or five weeks any of them should droop, and decline eating in the morning, give them pepper, by taking a small quantity of their regular food and about an equal quantity of pepper, mix it, and give as much as a healthy one of the same size would eat.

In my opinion, one healthy male turkey is sufficient for twelve or fifteen hen turkies.

I intend, when the reform bill on postage shall have become the law of the land, to write over my real name, but must decline doing so for the present. I have now on hand some six or eight letters asking my opinion upon this man's Poland fowls, and that man's Dorkings, &c.; and had they come to hand *post paid*, I should have been happy to answer them. I should be extremely happy to hear from your Virginia correspondent; and my remarks above are intended for a very different "variety" of mankind, than I believe him to be. K. L.

Hartford, Ct., Feb. 28, 1844.

SUGGESTIONS TO COTTON PLANTERS.

WILLIS GAYLORD—Sir—I quote here your queries propounded to me in your very friendly letter, also the remarks following those questions, and will endeavor to give you what I think are the facts in the case, leaving you to use either, to satisfy yourself or others, as you may wish. You say, "is it an error in me to suppose that the cotton growing districts of the United States, mistake their true interests, by devoting their attention to that article so exclusively? Would not a more mixed husbandry, one that should secure to the planter from his own soil, his required supplies of beef, mutton, bacon and bread, be preferable to risking all on one crop? I take it for granted, there is no good reason in the nature of things why this might not be; I suppose experience has demonstrated that there is no difficulty whatever in the growing of cattle, sheep, (and fine wooled ones too,) and pigs, in quantities sufficient for the wants of the planter; and that the system of extensive purchases of articles of food now so common, is more the result of habit than of necessity."

It gives me no inconsiderable pleasure to give you an answer to all this matter, by showing you what is now done by a great many farmers, and some planters in this part of the cotton region, which may tend to stimulate others to equal exertions, and will show many who live north of us, that we are not dependant for supplies to our northern friends, and thereby induce them to feel more like we were brethren and equals, than that we we were dependents. The capabilities of our soil to produce, our climate to perfect, and the energy of the sons of a southern clime to effect reasonable objects when necessary, are misunderstood by many in even this country, for that author of the effect of climate, is a southerner, and it is reasonable to suppose that there are far more in a northern country.

All experience has proved in every country where yet tried, that mixed husbandry is preferable to a devotion to any one crop, and to a certain extent is true in the cotton region; we must have no other crop to interfere in the gathering, that requiring all the time and attention of the farmer. That there is too much reliance on the cotton plant, the practice of our farmers will be a sufficient proof, and that much other business might be introduced that would not conflict wtth the interest of the cotton grower, we all now believe.

We can assuredly make an abundance of beef, mutton, bacon, bread and wool to feed and clothe us well; we can also rear our own horses and mules; and I make no question but what we could add sugar and molasses, with silks for our fair dames, would they but take hold in a proper spirit. I make not these assertions without absolute proof, and enough to satisfy any jury of 12 men in the United States. My five nearest neighbors in this county, having near on to 300 persons in the aggregate, have made for the last 3 or 4 years more meat, corn and beef than was necessary; I might add mutton also, although the quantity consumed is small. I can better say of myself than of others, I must therefore rely more on this, trusting a bare exposition of facts will be construed fairly.

I can make an average crop for any consecutive 10 years, (and am even willing that the last 4 be counted in, as I have been here myself only 4 years since 1836,) 6 bales of cotton weighing 400 lbs., 200 bushels of corn, 500 lbs. of pork, raise 5 lambs, 3 calves, per hand that works in the field, with 1 colt to 4 hands, and an abundance of oats, rye, millet and fodder, potatoes and garden vegetables, to feed one horse to each hand, all cattle in the winter daily, and whites and blacks. I have been much engaged in putting the farm in ship shape order, and have lost much time from the mere farm work, but I can make a better showing than this, and make no question that I will ere 10 years pass, make, besides my crop of cotton, (6 bales,) pork and hay for sale. I can even now sell off yearly some half dozen beeves, a few milch cows, 30 or 40 mutton, and have sold on an average, $500 worth for 3 years, without at all interfering with what I say can be made, or at all injuring in number or quality the stock that I found here on my return in 1839. I am not yet fixed, for you well know how long it requires to get a farm properly arranged; owing to this, and to a never ending range for hogs, I am harrassed yearly for meat; the pigs I had castrated and spayed in 1840, Jan. and April, for killing Dec. 1842, numbered 93, and although I had an abundance of corn, I did not kill *of them* over 20 head; the others I have never seen. I must raise my meat in an enclosure.

Now, sir, if one man can do this, others can, and if cotton will not rise over 8 cts., we will all do it, and do more, for we can and will make our own clothing.

The great difficulty in this country has been, cotton has been to all appearances, a remunerating crop, and in many instances only in appearance; for when it rises, and the planter sells a per hand crop of $300, every thing is high in proportion, and by purchasing every thing, he is really but little better off at the end of the year than at the beginning. My own opinion is, and I have made every reasonable effort to give it publicity, that it is a duty every man owes his family, his country, to make every thing necessary which will not withdraw his force from their trade, and after which, as much cotton as he can—thus making sure of bread, meat and work animals, so if he makes only 4 or 5 bales per hand, those few bales will be nearly clear.

I have a portion of a mutton now in my smoke house that is very passable meat, though not fat; killed off a rye patch, which was sown on the corn ground, no plow being used at all. This season being more unfavorable for sheep than any I have ever seen, continued rains, not a head of sheep has been housed an hour; and worse on my sheep than on natives, being part bred Bakewell. I killed some two of my choice veals this fall, no extra care or keep, and a beef near 4 years old, a spayed heifer raised entirely in the woods, with a run in the field after gathering corn; she weighed 426 lbs. and gave me 46 lbs. of tallow; she was to appearance, no fatter than when turned in, and was only turned in to give flavor to her meat; I have got over 30 lbs. of tallow from a beef 6 to 7 years old, killed out of the woods. I therefore say there is no difficulty in raising either beef or mutton. Pork can be bought, made in this county, at 3 cts.—enough to prove that we can raise pork. My own opinion is, that we can raise pork cheaper than those countries where pork is the staple commodity—and here are my reasons—a farmer can cultivate 10 acres of corn land per hand, besides enough in cotton to ensure him 4 bales, and a large crop of oats and sweet potatoes, which with the aid of a peach orchard, planting his corn land with peas and pumpkins, he can rear readily double the quantity of hogs he will require; he then can take time to handle these 4 bales so as to nett him in price, over 5 bales, and give him the surplus quantity of pork a clear gain. Thus in reality making by his staple production a fair crop, which as a matter of course, gives him the pork free of cost. Should he require a crop of 6 bales, let him plant for 5 and handle well, to make in price and saving of expense, the 6th bale.

A neighbor of mine has killed hogs averaging 300 lbs., this winter; they were raised entirely in the woods, as our stock hogs are raised, then turned into the pea field, and afterwards corn fed for a few weeks; clearly proving the good effect of crosses on his stock; 4 years ago his stock did not average 200 lbs., and raised as now, but the range far better; he has killed 46 that will over-go 275 lbs., some going to 320 lbs., 18 months to 2 years old. He has purchased of me boars at different times. The exact weights I will ascertain and publish in the S. W. Farmer.

We do not raise large cattle or hogs, or make large yields of corn like our northern brethren; but have a fair range, and with land not worth over $5 to $15 per acre, we can afford to cultivate more.

I have a friend, who in South Carolina even, makes what is considered a fair crop there, and though he works something over 100 hands, yet makes corn to sell with his own meat. In an address delivered in South Carolina, by the Hon. George McDuffie, he states he makes a fair crop, raises his own corn and meat, and even his work horses. I think this statement is made in his address; and I think it entirely feasible, for every county in a cotton growing State to do the same, and supply its county seat with bread and meat.

Were I to devote myself entirely to a cotton farm, not attend to improving stock and buildings, I feel perfectly certain that I could sell as much meat as I would use, raise enough horses to fully supply the wear and tear, and yet sell my 6 bales of cotton. There are many even here who would doubt it, but sir, I am a practical farmer, make farming my only business, and I feel that injustice is done, when called theoretical, because I have had the *chance* of receiving a first rate education, and read more or less every day of my life. I only ask for the same measure to be meted unto me, as is done to other men who reside on their farms and superintend themselves all the minutiæ of farming. Yours, &c.

M. W. PHILIPS.

Log Hall, Miss., Dec. 31, 1844.

SWAMP WILLOW—(*Salix discolor.*)

MESSRS. GAYLORD & TUCKER—In a postscript to my communication published in the Cultivator, vol. 10, p. 98, I promised you some information relative to the cultivation of the swamp willow for economical purposes, attention having been directed thereto by Mr. Wm. Partridge of New-York. The promise had slipped from my memory, until recently turning over the leaves of the last volume of the Cultivator, I was reminded of my promise, and now proceed to redeem it.

An important and extensive employment has grown out of the use and cultivation of the willow. Great quantities are imported, while we see it growing wild in swamps and along water courses, from one end of the United States to the other, and almost untouched, although if collected in its native state, or cultivated as in Europe and some parts of this country, it would afford a profitable occupation to the industrious, at seasons of the year when other work would not interfere.

Hoops for casks are made of willow in Europe, as we see in the wine casks of France and Portugal. Irish potatoes are imported in hampers of the same material, and champagne in willow baskets. Bottles and demijohns come to us covered with willow, and willow is cut and dried to be converted into charcoal, which makes a better article than any other wood for the manufacture of gunpowder.

But of all the uses to which willow is applied, both here and in Europe, that of making baskets of all kinds, and many articles of wooden ware, is the most extensive. It gives employment to many, and might to many more, if our own resources were husbanded, and our own raw material more generally sought, cultivated and used.

Willow and willow baskets are both imported from Holland and France. Most of the baskets manufactured in this country, are made from the imported willow, but some of American growth is also converted into useful articles, as will hereafter be shown. The imported willow is of the osier kind, long, slender and flexible. It comes in bundles four feet in circumference or sixteen inches in diameter, and of three lengths. It is sold in assorted parcels, and the purchaser is required to take a portion of each length. The smallest size is from three to four feet long; the middle size five to six, and the third size seven feet or over. The present price of such willow, free of bark and in good condition, in the city of New-York, is 8 cents per pound. The writer has known it to sell at $1 to $1,25 by the bundle.

Immense quantities of willow baskets are imported from France, but they are all of the smaller and finer kinds of wooden ware made of split willow. Our artizans cannot compete with the French in the manufacture of these kinds of willow work, on account of the very low wages in France, or other cause. There, much of the fine and fancy work is executed by females, while here, willow baskets are wholly made by males, who require higher wages than males or females in European countries. Hence it is that France and Germany have possession of the American market in the supply and sale of fine and fancy willow-ware, which can be manufactured here by American artists, but they are undersold by foreign workmen. There is perhaps another reason for this state of things. Some years ago, a French merchant now retired from business, informed the writer that he could not conceive how the French willow baskets could be imported and sold so cheap, unless the government was defrauded in the duties.

But on the other hand, our countrymen have exclusive possession of the manufacture of the large, coarse and bulky articles made of willow, which cannot be imported on account of the space they occupy, and the amount of freight such space would command. The greater part of the willow they use however, is that imported from Holland and France. The trade of making willow-ware is an extensive one, and is principally carried on in our large cities; though of late, it is extending to other parts of the country where the native raw material is abundant and easily procured, or where this and the foreign varieties are cultivated.

Here then we have a trade, an occupation for many of our countrymen, which consumes a great amount of raw material, much of which might be supplied from indigenous growth, or from cultivated plants of native and foreign varieties of willow. There is much to encourage this undertaking, were it more generally known how easily it may be accomplished. The following information was obtained from a person who has a plantation of willows on Staten Island.

Mr. John Reed of Southfield in Richmond county and State of New-York, is an Englishman by birth and has followed the business of cultivating the native and foreign willows for thirty years or more in this country. The farm he cultivates, contained a useless bog of an acre or more, which by ditching and draining, he has converted into a willow plantation, from which he reaps an annual harvest much greater than from an equal amount of land on the best part of his farm. He has the native willow at the head of this article, the Pennsylvania, the Welch, the Dutch and other varieties which he imported from England. He has another plantation of willows in the adjoining township of Westfield.

Mr. Reed has at different periods imported fifteen varieties of willow of the osier kind from England, but the best kinds raised there, degenerate here from the nature of the climate. They start well in the spring, but stop growing in the heat of summer, and limb out rough. Two varieties however, grow here as well if not better than in England. One of these is the Welch, the other known there as the Dutch, with a white bark. These are important facts for those who may hereafter undertake to cultivate willow plants, derived from the experience of thirty years in lat. 40 deg. 30m. north.

The American swamp or wild willow, grows all over the United States, of which there are several varieties. The Dutch immigrants who settle in the interior, cut and use it in the manufacture of articles of utility. Some is cut in the neighborhood of Albany, and sent in bundles to the New-York market. The native willow is best for coarse, strong and tight work, but is not adapted for splitting or twisting, qualities which belong in an eminent degree, to the cultivated Welsh willow.

There is a variety of willow cultivated along the Schuylkill and Delaware rivers in Pennsylvania, which is reputed to be the best in this country for all kinds of work. It is extensively cultivated by the Dutch, who are said to have imported it into that State in the time of William Penn, the original founder of the colony of Pennsylvania. It is known there by the name of the *Green willow*. Mr. Reed also cultivates the Pennsylvania willow, which he introduced into this State in 1810. Several besides himself, raise this and other varieties of the willow on Staten Island. The green willow grows

large, and when properly prepared and dried, is converted into charcoal by Dupont to make gunpowder.

To those who are desirous of undertaking the cultivation of the willow, Mr. Reed can supply cuttings of the best varieties, as he has heretofore complied with orders from Boston, Kentucky, and the interior parts of the State of New-York. March and April are the months to procure them. They should be set out in rich land along streams occasionally overflowed, or in swamps, which if too wet, should be ditched and drained.

The yearly crop of willow twigs is cut in March. The cuttings are tied into bundles, and the butt ends placed in the water of the swamps where they grew. They are left there a shorter or longer time, according to the season, and until the swelling of the buds indicates the flow of sap, which loosens the bark, when they are removed and denuded of the bark, which then comes off very easily.

Mr. Wm. Leveridge, a miller on the Great Kills in Southfield, also has a plantation of Welsh and American willows. The former grows long, slender and smooth, and is well adapted for work which requires it to be split or twisted. Enough for the present. Perhaps more hereafter, from yours, RICHMOND.

IMPORTATION OF MERINO SHEEP.

MESSRS. GAYLORD & TUCKER—Some two or three months since, I saw an article in one of our papers, purporting, I believe, to be taken from the Albany Cultivator,* giving a very erroneous account of the importation of Merinoes into this country; and what was somewhat more surprising, the writer made a parade of communicating the information for the benefit of posterity.

The deep interest I took in furnishing my country with this invaluable animal, the direct concern I had in the shipments, and my official station, afforded me the means beyond that of any other person, of becoming accurately acquainted with the number shipped, and the ports to which shipped; which information I have embodied in my letter of the 31st January last, to L. D. Gregory, Esq. which was published in the Bellows Falls Gazette of the 24th ult.; and I take the liberty to send you a paper with the request of a republication in the Albany Cultivator. This request I have no doubt you will comply with, because you must be desirous that the agricultural community should have correct information upon all subjects affecting their interests, and because you must be averse to give currency to statements, professing to be intended for posterity, that are not marked by truth and fairness, which all, except gentlemen of poetical imaginations, must deem essentials, when information is intended to be transmitted to future generations.

I am the more desirous of the republication, as I have understood that much imposition has been practiced in regard to Merino sheep, in the western part of your State.

Respectfully yours, WM. JARVIS.

Weathersfield, Vt., March 1, 1844.

WEATHERSFIELD, VT., JAN. 31, 1844.

Dear Sir—In reply to your letter of the 15th inst., requesting me to give you an account of the Merino sheep of Spain, and of their introduction into this country, &c. &c., I shall with pleasure do it so far as my memory serves me, and I believe that will be found to be tolerably correct, as I long since gave much attention to the subject, from a conviction that the wool growing business in the United States would prove a source of national prosperity. In Spain the fine wooled sheep are divided into two classes; the Trashumantes or traveling sheep, and the Estantes or stationary sheep. The wool of the Trashumantes is very much superior to that of the Estantes, owing undoubtedly, to the superior care and attention which is given to them. The Trashumantes are owned in flocks from 5,000 to 30,000; the larger flocks are placed under the superintendence of a mayoral, who has the whole control over the flock, and annually accounts with the owner for the nett income. Two shepherds, four dogs, and a pack-horse or mule are employed for every thousand sheep. The traveling sheep are divided into three classes, which take their names from the provinces where they are principally kept, viz: the Leonesa, which are by far the most numerous, and are esteemed the finest sheep in Spain; the Segovian, which are considered the next best, and the Sorian, which are deemed a little inferior to the latter. I never saw any of the Segovian or Sorian sheep, and therefore speak of them from their general character, derived from Spaniards the best informed on the subject. The Leonesa are pastured in the summer on the mountainous and hilly country of Leon and the two Castiles, and in the fall are driven into the plains of Spanish Estramadura to be pastured through the winter.

Many of their flocks are driven two hundred miles from the summer to the winter pasture and *vice versa*. Some explanation will be necessary for the better understanding of the cause of this management. The plains of Spanish Estramadura are subjected to an almost invariable drouth from the latter part of April to the autumnal equinox; but the rains commence about the 21st of September, and continue to fall every two or three days in very heavy showers till the latter part of March, when they gradually fall off till the end of April. In six or seven weeks from the first rain, from an apparently arid waste, those plains are covered with a beautiful coat of verdure and so continue till April, as the thermometer rarely falls below 40 deg. of Fahrenheit at sunrise. Whilst the plains are thus parched up in summer by drouth, in the mountainous and hilly regions, they have occasionally refreshing rains, which there keep their pastures good throughout the summer. Their flocks are usually started in the month of April from the plains of Estramadura to their summer pastures, and in October back again. They are generally sheared in the latter part of May, and the wool is sent to St. Andero and Bilboa, the two nearest seaports to their summer pastures, for sale. The proprietors of the flocks always own lands in the mountains and in the plains, sufficient for both their summer and winter pastures. From the circumstance of their sheep being fed the year round upon green fodder, it was the general opinion in Spain that the merino would not succeed in any other country. But the experiments made in Saxony, in 1765, by the introduction in that year of the Spanish merino, it has been proved beyond all question, that with proper care and management, wool can be grown quite as fine as the Spanish, when fed upon dry fodder four to six months in the year. In fact they have succeeded in all countries where they have been tried, except in England; and their deterioration there, must undoubtedly be owing to the extreme humidity of that climate.

The origin of the fine wooled sheep of Spain appears to be a question of much doubt. It is certain that Columella, a Spanish writer on agriculture in the days of Augustus Cæsar, speaks of fine wooled or covered sheep. It is probable they were carried into that country by the Carthagenians or Romans, as the name *mareno*, implies in Spanish, from or beyond sea. But it is of little consequence to those who want a soft, warm, handsome garment, whether those sheep were natives of Spain, or whether the original stock was imported into it from another country.

I shall now call your attention to the first introduction of them into the United States. Soon after the accession of Mr. Jefferson to the Presidency, Chancellor Livingston was appointed Minister to France, and in 1801 or 1802, he obtained from that government three or four merinos of the Rambouillet flock, which he sent to New-York and put on one of his farms. This flock was obtained by the king of France from the king of Spain, and were undoubtedly pure blooded sheep. A little before Gen. Humphreys left Spain, he was enabled to get two hundred sheep from Spain into Portugal, and they were sent to Figueira, at the mouth of the Mondego, and thence shipped to the United States. From what flock he obtained them, I never could learn, though I inquired a number of times; but as Spanish Estramadura and Leon border on Portugal, from 38 deg. of latitude to the northern boun

* In a letter since received from Mr. JARVIS, he says—"I perceive that I was mistaken in attributing to the Albany Cultivator the article to which I alluded, in my letter to Mr. Gregory; and I now cheerfully and promptly offer to you an apology for the error."

dary of Portugal, and as no other than the Leonesa Trashumantes are found in that part of Spain, there can be but little doubt that they belonged to that race.

I attempted in 1806, also in 1807, to obtain some from the most celebrated flocks, but the laws were so strict against their exportation without royal license, that I failed of success. After the French invasion in 1808, the [illegible] became more relaxed, and in 1809, by special favor, I [illegible]ned two hundred Escurials. At the second invasion of the French under Joseph Bonaparte, the rapidity of the march of the French troops hurried the Supreme Junta from Madrid, and they retired to Badajos. Being without money, and being afraid of disgusting the Estramadurans, by levying a tax upon them, they were compelled to sell four of the first flocks in Spain, which had been confiscated in consequence of the proprietors joining the French. These were the Paular, previously owned by the Prince of Peace; the Negretti, previously owned by the Conde Del Campo de Alange; the Aqueirres, which had been owned by the Conde of the same name, and the Montarco, owned by the Conde de Montarco, and were such sheep as could not have been got out of Spain, had it not been for the invasion of the French and the distracted state of the country growing out of that invasion. When the Junta sold, it was upon the express condition of their granting licenses to carry them out of the kingdom. Four thousand of the Paular flock were sent to England for the king; and Col. Downie, a Scotch officer in the British service, but who then held the rank of General in the Spanish service, and I, purchased the remainder of the flock, between three and four thousand more; and of this purchase, I took fourteen hundred, and he sent the rest to Scotland with the exception of two or three hundred, which he sold to come to this country. Sir Charles Stewart purchased the Negretti flock and sent them to England, with the exception of about a hundred I got out of his flock after they reached Lisbon.

I purchased about seventeen hundred of the Aiqueirres flock of the Junta, and the remainder was sold and sent to England. The Montarco flock was bought by a Spaniard and a Portuguese, and about two thousand seven hundred were shipped to this country. I shipped to the United States, the fourteen hundred Paulars, one thousand seven hundred Aqueirres, two hundred Escurial one hundred Negrettis, and about two hundred Montarcos. Of this number, about one hundred were sent to Wiscasset and Portland, one thousand one hundred to Boston and Newburyport, one thousand five hundred to New-York, three hundred and fifty to Philadelphia, two hundred and fifty to Baltimore, one hundred to Alexandria, and two hundred to Norfolk and Richmond. Besides those which I shipped to the United States on my own account, there were about three hundred Gaudaloupes purchased by others, and two to three hundred of the Paular flock sold by Gen. Downie, shipped to Boston; and of the Montarco flock, shipped by others, about two thousand five hundred were sent to Boston, Providence, New-York, Philadelphia, Baltimore and Savannah. The Gaudaloupes, Paulars and Montarcos, which were shipped to Boston by others, were for the account of Gorham Parsons, Esq, Gen. Sumner, D. Tichenor and E. H. Derby, Esq. All these sheep were shipped in the latter part of 1809, during 1810 and the early part of 1811, and were the only Leonesa Trashumantes, if we include Gen. Humphreys' and Chancellor Livingston's, (which I have no doubt were of the same stock) that were ever shipped to the United States. Badajos is but little over one hundred miles from Lisbon, and all the sheep purchased there and in that vicinity, were shipped from Lisbon. I was then Consul there, and from my office was accurately acquainted with all the shipments, as certificates of property from me always accompanied them.

I shall now, in compliance with your wishes, give you a description of the sheep of the different flocks sent to this country. The Paulars were undoubtedly one of the handsomest flocks in Spain. They were of middling height, round bodied, well spread, straight on the back, the neck of the bucks rising in a moderate curve from the withers to the setting on of the head, their head handsome, with aquilline curve of the nose, with short, fine glossy hair on the face, and generally hair on the legs, the skin pretty smooth, that is, not rolling up or doubling about the neck and body, as in some other flocks, the crimp in the wool was not so short as in many other flocks, the wool was somewhat longer, but it was close and compact and was soft and silky to the touch, and the surface was not so much covered with gum. This flock was originally owned by the Carthusian friars of Paular, who were the best agriculturists in Spain, and was sold by that order to the Prince of Peace when he came into power. The Negretti flock were the tallest merinos in Spain, but were not handsomely formed, being rather flat sided, roach back and the neck inclining to sink down from the withers; the wool was somewhat shorter than the Paular and more crimped, the skin was more loose and inclined to double, and many of them were wooled on their faces and legs down to their hoofs. All the loose skinned sheep had large dewlaps. The Aqueirres were short legged, round, broad bodied, with loose skins, and were more wooled about their faces and legs than any other flock I ever saw, the wool was more crimped than the Paular, and less than the Negretti, but was thick and soft. This flock formerly belonged to the Moors of Spain, and at their expulsion, was bought by the family of Aquirres. The wool in England was known as the Muros flock, and was highly esteemed. All the bucks of these three flocks had large horns. The Escurials were about as tall as the Paulars, but not quite so round and broad, being in general rather more slight in their make; their wool was crimped, but not quite so thick as the Paular or Negretti, nor were their skins so loose as the Negretti and Aqueirres, nor had they so much wool on the face and legs. The Montarco bore a considerable resemblance to the Escurials. The Escurial flock had formerly belonged to the crown, but when Philip the 2d built the Escurial palace, he gave them to the friars, whom he placed in a convent that was attached to the palace, as a source of revenue. These four flocks were moderately gummed. The Gaudaloupe flock was rather larger in the bone than the two preceding, about the same height, but not quite so handsomely formed, their wool was thick and crimped, their skins loose and doubling, their faces and legs not materially different from the two latter flocks, but in general they were more gummed than either of the other flocks. In point of fineness there was very little difference between these six flocks, and as I have been told by well informed persons, there is very little difference in this respect among the Leonesa Trashumantes in general. The Escurials, the Montarcos and the Gaudaloupes were not in general so heavy horned as the other three flocks, and about one in six of the bucks were without horns, or what is commonly called a polled buck.

I had selected by the Paular shepherds, who came with that flock, three hundred sheep which I shipped to Newburyport. The half of these were Paulars, a fourth Aqueirres, an eighth Escurials and the other eighth Montarcos and Negrettis. These I put on the farm in Weathersfield, Vt., that I bought after my return to the United States, and also drove up about a hundred, the remainder of those I had shipped to Boston. In compliance with the invariable practice in Spain, I bred the respective flocks separately, or what in farmer's language is called in and in; the custom in Spain having existed from time immemorial, of breeding the bucks and ewes of the same cabanna or flock together, or in and in; but in about 1816 or 1817, I mixed the different flocks together, and have so bred my merinos ever since.

About ten years ago I found some twenty or thirty samples of the Paular flock that was sent me from Spain to Lisbon, and by clipping from my sheep about as many samples, just as they came to hand, I was satisfied that my flock had improved; and some ten or a dozen wool growers who compared the two, were of the same opinion. Whether this was owing to mixing the several flocks together, or to a very close attention to the selection of my bucks, I cannot say, but the fact unquestionably is so. I well know, as you say, that many have been latterly running about the country puffing up their sheep as full blood Paulars, which name has doubtless been adopted because it is generally understood that the Paular flock carried the heaviest fleeces, but with the exception of eight or ten pure

blood merino ewes which I have sold within three or four years, and about fifty pure blood merino bucks within about five years, I do not know nor do I believe that there is a pure blood merino in the United States, besides those which I own.

The reason for this opinion is, that from 1823 to 1836, the rage for Saxony sheep was so great that few or none of our wool growers would breed from merino bucks, who could get Saxony; and after the large importation of Saxony in 1825 and 1826, the Saxonies or their crosses were within the reach of almost every breeder. From 1838, as the different prices of wool were in no fair proportion to the difference of its quality, the light wool Saxony fleeces got daily more and more out of repute until we are finally getting into the opposite extreme, and are giving up the fine, soft felting wools for the coarser and harsher and heaviest fleeces. This is a great error, because fine wools must always be in demand for our superfine broadcloths and cassimeres, and with a proper selection of bucks and ewes, fleeces averaging three pounds weight, may be as easily grown of fine, soft, silky wool, possessing the felting property in the greatest degree, as can be from sheep which yield only two pounds and a quarter to two pounds and a half a fleece.

In 1810 a very intelligent London wool broker, who was sent to Lisbon for the purchase of wool for several English manufacturing establishments, which was principally sent there for sale, during that year, in consequence of the French being in possession of the North of Spain, informed me that the Leonesa wool possessed the felting property in a greater degree than the Saxony, and that it was generally used in England for the manufacture of superfine cloths in preference to the Saxony. Since that time, the Saxony doubtless has been very much improved, and may have attained to equal perfection in this respect. I think there is a general error prevailing in our country in regard to wool. Light fleeces and fine wool are almost universally considered as synonymous. A flock of sheep that will yield three pounds of wool by being evenly fed summer and winter, and kept in fair stock case, by being half starved both summer and winter, may be reduced to two pounds. Now no one who knows any thing about wool, will undertake to contend that this half-starved and sickly growth of wool will make as strong and durable a cloth as will a healthy growth of wool from the same sheep; nor will the cloth made from the starveling wool, handle so soft and well as that made from the healthy wool. Sheep, too, which have been well pastured in summer and half-starved in winter, which is no uncommon case, in keeping more stock than our winter fodder will maintain, will have a very unequal growth of wool; the summer growth will be strong and flexible, while the winter growth, though a shade finer in the fibre, will be dry and tender; and such wool will not make cloth which is strong and soft to the touch. The Saxony manufacturers understand this principle well, and select accordingly, and hence make more durable cloths than the English; and they handle as well, notwithstanding the superior finish of the English. Yet we hear our wool buyers crying out, fine wool, sir! two pounds and a quarter, two pounds and a half, which seems to be their principal standard for fine wool; and according to this standard, the wool of a flock of sickly starvelings, as brittle as rotten straw, would be the acme of perfection.

I think I have now answered all your questions, and if I have tresspassed too far upon your patience, I hope to find an apology in the solicitude which you evinced to obtain full information on the subject. Since beginning this letter, I have looked over some letters and papers, touching the number of merinos exported to this country, which has enabled me to correct an error in my letter to Mr. Calvin Benton in 1836, respecting the number shipped, and which error I fell into from trusting altogether to my memory. Respectfully, WM. JARVIS.

CULTURE OF COTTON IN GEORGIA.

MESSRS. GAYLORD & TUCKER—About the middle of January, 1843, I moved to this place, which is considered by the neighbors, the poorest plantation in the neighborhood, it having been in constant cultivation for upwards of twenty years, without rest or manure. It is poor pin land, but lies almost level, and is easy to cultivate. I very soon became a subscriber for your valuable Cultivator, and noticing Dr. Cloud's improved plan of raising cotton, I was induced to try one acre. Not having the proper kind of compost, I used for broad-cast, raw stable manure, and in each hill half a gallon of such as I could gather in the barn-yard, and treated it throughout after the Dr.'s plan. From insects and other causes, there was 568 missing hills; from this acre I gathered 1,428 lbs. seed cotton. In August, we had a slight drouth; the cotton turned yellow, and cast a great many of the balls and squares; this I think was occasioned by the raw stable manure.

I also planted six acres four and a half feet by three, and put in each hill half a gallon of barn yard manure, not having any for broadcast cultivation, nearly the same as the above; the yield was above a thousand pounds per acre. The balance of my cotton was planted in the ordinary way without manure, 3½ feet by 12 inches. From this I gathered 515 lbs.; I think there was no difference in the quality of the land previous to planting. I am fully satisfied, if I had used the proper kind of compost, instead of the unrotted stable manure, and a full stand, I would have had 3,000 lbs. instead of 1,428. I am so much pleased with the Dr.'s plan, that I expect hereafter to practice it as far as my ability will afford; and if I could obtain some of Dr. Cloud's improved cotton seed, I flatter myself that in a few years I would be able to astonish some of our cotton planters that adhere so strenuously to the old system of kill, cripple and go ahead.

Houston Co. Ga., Jan. 30th, 1844. J. D. H.

PHILOSOPHY OF WOOL—No. III.

ELASTICITY.

MESSRS. EDITORS—A writer observes—"There are two antagonist principles continually at work in every part of the frame of every animal; and it is on the delicate adjustment and balance of power between them, that all healthy and useful action depends; the disposition to give way, or submit to some alteration of form when pressed upon, and an energy by means of which the original form is resumed, as soon as the external force is removed." These two principles are beautifully exemplified in the fibres of wool, obviously much dependant on the numerous and minute spiral curves, so manifest in the Saxon and Merino. Take for instance, a single fibre of wool of these varieties of sheep, if it be stretched to its full length, and then suddenly set free at one extremity, it will resume its ringlet form; and hence upon the union of *pliability* with the *elastic principle* chiefly depends the usefulness, and consequently value of wool.

The play of these powers is differently adjusted in different wools. In the Saxon, calculated for our finest fabrics, the action of these opposing principles is beautifully balanced. Hence it is the fabric is so easily shorn of its superfluous nap, the facility with which it yields to pressure, and covers the threads of the cloth with a dense, soft pile. Notwithstanding the injury the elastic powers may receive by the process of manufacture, yet by the aid of a microscope, the nap presents innumerable minute curves closely tinging the texture; and to this much of the beauty of our finest cloth is owing. To these opposing powers of the fibre, the felting principle is not a little indebted, as will be explained hereafter.

SPIRAL CURVE.

The spiral curve or ringlet form of wool, has been referred to. This is one of the distinguishing qualities between wool and hair, the latter being comparatively straight. It is remarkable in all short wooled sheep, but in no other varieties is it so conspicuous as the Saxon and Merino. It is observable in the Leicester and other long wooled varieties, but in a far less degree; and with some species of the goat under the hair of which is found a perfect wool, having the true felting property, and the fibre considerably curved.

I am now about to state a fact, confirmed by my much lamented friend, Mr. H. D. Grove of Rensselaer Co., who was a native of Saxony, and which from its novelty, will surprise many.

There is an intimate connexion between the fineness

of the wool, and the number of the curves, or otherwise, *in proportion to the number of curves in a given span, is the diameter of the fibre.* It should be stated, however, that this is more generally true of *pure* Saxon and Merino. It can be easily demonstrated, if the experiment is fairly made with the *micrometer*, care being taken not to destroy the curves by extension, but the fibre placed in the instrument as it *naturally grows upon the sheep.* From M. Lafoun's work on German management of sheep, the following is extracted, bearing on this point:

"Those breeding *pure* Saxons, inspect their flocks three times in the year; before winter, when the selection of lambs is made, in the spring, and at shearing time. Each sheep is placed in its turn on a kind of table, and examined carefully as to the growth, the elasticity, the pliability, the brilliancy, and the fineness of the wool. The latter is ascertained by means of a micrometer. *It being found that there was an evident connection between the fineness of the fibre and the number of curves,* this was more accurately noted, and the following table was constructed. The fleece was sorted in the manner usual in France. The fineness of the Superelecta, or picklock, is represented by a span corresponding with the number 7 on the instrument."

Sort. Name	Curves in an inch.	Diameter of fibre.
1. Superelecta,	27 to 29	7 or 1-840th of an inch.
2. Electa,	24 to 28	8 or 1-735th "
3. Prima,	20 to 23	9 or 1-660th "
4. Secunda Prima,	19 to 19	10 or 1-588th "
5. Secunda,	16 to 17	11 or 1-534th "
6. Tertia,	14 to 15	11½ or 1-510th "

The above will show the necessity of more care with wool growers in breeding from such sheep only whose wool approximates nearest to the principle laid down, as it is to this curled form of wool its most valuable uses depend. It is one agent, though not the principal, in producing the phenomena of felting. "It materially contributes to that disposition of the fibres which enables them to attach and entwine themselves together; it multiplies the opportunities for this interlacing, and it increases the difficulty of unraveling the felt."

The numerous and minute curves being, as observed, eminently characteristic of the pure Saxon and Merino, will serve as a sure test, in all cases, of the purity of blood, and therefore affords a certain and unerring guide in the selection of breeding sheep. If it is rigidly adhered to, the every day attempts to dispose of grades for high bred sheep will be frustrated.

SOFTNESS.

It is not as generally known as it should be, that softness is a quality of wool of much consequence. When the wool buyer and stapler proceed to an examination of a parcel, their judgment will be materially affected as to its value, whether "soft in handle," or otherwise. This, however, generally speaking, is the result of comparative fineness; but by no means always so, for wool of the same quality of fineness has not the same degree of softness. There are several causes to account for it, and among them is soil; as for instance, the chalky districts of England, affect the wool to such an extent as to make it invariably brittle and harsh. This however, is only local. The general cause of a deficiency of softness in wools of the same breed, may be referred directly to the *condition* of the sheep. In a former number it was stated that when the animal was kept in uniform good condition, the necessary quantity of *yolk* was supplied. Now if there is but little of this substance, which will follow an abuse in management, the wool will be less pliable and "kind to feel." Therefore it may be set down as a universal rule, that wool owes much of its softness to the *presence* of a *sufficiency* of *yolk*.

As a testimony how much this quality of wool is appreciated by the manufacturer, it is affirmed on the authority of an English author, "that two parcels of sorted wool being taken, possessing the same degree of fineness, but the one having the soft quality in an eminent degree, and the other being harsh, the cloth prepared from the first, at the same expense, will be worth more to the manufacturer than the other, by full 20 per cent." The salving of sheep in Scotland and the northern extremity of England, alluded to in my last, is very much for the object to promote softness of the wool; and the result from the manufacture of such wool, as stated by Mr. Bakewell, will also be remembered.

Trueness of the fibre, and the *influence* of *temperature* upon wool will be embraced in the following chapter.

L. A. MORRELL.

Lake Ridge, Tompkins Co., N. Y.

ROAD WORKING.

MESSRS. GAYLORD & TUCKER—Among the many useful subjects that have received attention in the volumes of the Cultivator, I see this has not been entirely lost sight of. That great errors exist in road working, is obvious to every reflecting mind. If the time spent towards making and repairing the roads in our county had been judiciously applied, it would have made every foot of them free and in better condition than they now are; but such is not the case; on all the great market roads, the farmer is mortified with the sight of a gate across it.

I shall now undertake to give you a description of the way our roads are made and repaired in this township, with this remark, that I believe they are as well attended to as in any part of our wide country. Our population for industry and intelligence, need not fear to be compared with any other. At our annual town meetings, a certain amount is raised for the roads, and overseers appointed for the several districts. Then by a master stroke of policy, before they leave the ground, they pay $500 of this tax by extra allowance on the price of their labor. Next when convenient, the overseer calls them out to work on the road, to meet at such a place, one with his team, and a dozen or twenty, or perhaps more, with each a shovel; this helps to support them when they get too lazy to stand alone; then commences the work; the team, with one to hold and one to drive, goes ahead and scratches up a little dirt, and the rest follow after and throw it in; and should it happen not to rain for some days to come, they will not do much hurt. If one of the number should chance to say where an improvement might be made, he is silenced by the majority telling him that it would be spending too much time in one place. If a small stone bridge is necessary, the overseer, who is generally very much interested in the welfare of the district, tells them it is wrong to take the district money for such a purpose; so a county freeholder is called, and as much paid in fees as would have done the work; thus taxing themselves two dollars to save one, and this is done by men who are shrewd calculators in their private affairs; they appear to feel and act as if this was a burthen imposed upon them in which they have no interest.

Thus I have tried to give you a true picture of road working with some few exceptions so far as my observations extend; I shall now try to point out some remedies as they occur to my mind. And first, let the people bring their minds to bear on the subject. Next, let the one who has the management of the work, call out no more help than can be profitably employed; six men will always do more work on the road than twelve; be sure to have all the necessary team help and tools of every sort that may be wanted. If there is a hill that requires all the exertion of a team to draw 10 cwt., let them be unceasing in their efforts to improve it, either by altering its course, or by pulling it down till they are able with the same exertion to draw 20 cwt.

We live here in a hilly country, and I know many such that before this, might have been lessened one-half in the draft, with the tax that has been paid. There is a large proportion of our roads, from the nature of the ground, and the vast amount of work it would require to cover it with gravel "8 or 10 inches," must remain pretty much as they are; they are mostly level, and when frozen or dry are good; but the hills are hills in all seasons and in all weather. And last of all, bring the subject to notice now and then in the useful columns of the Cultivator. Good roads and good husbandry are nearly allied. On the other hand, where no effort is made to improve the one, the other is in a corresponding condition.

Newton, Sussex co., N. J. SAMUEL CASSIDY.

The Garden and the Orchard.

CULTURE OF FRUIT—No. III.

ADDITIONAL REMARKS ON TRANSPLANTING, GRAFTING, &c.

The writer having just been favored with some criticisms, and additional remarks, from a source entitled to the highest confidence, hastens to add them to the remarks already furnished.

"*Seven feet* in diameter is not too large for the holes, but it is too much to insist on when many trees are to be transplanted; because common folks would not obtain the necessary labor in the planting season. I could not, for one. By being too strenuous, our advice might be wholly rejected." The object of the writer of these articles was to state what he considered the *best* and *most economical* course, not what he thought would be most probably followed.* The holes may be dug for ten cents a piece; the trees cost twice as much, and will grow more than twice as fast, and produce more than double in a given time. But very few can afford to spare the labor in the transplanting season; hence it is better either to make the holes somewhat smaller, to dig and nearly fill them at some other season, or to transplant one-half as many, which, if done in the very best manner, and afterwards well cultivated, would probably yield more fruit than a much greater number taken care of in the usual manner. The necessity for large holes would doubtless be in a great degree obviated, in planting large orchards, by plowing a strip of land eight feet wide for each row, of double depth, and applying and thoroughly mixing with the soil, so much well rotted manure, compost, or chip-dirt, as the case may require.

"The great benefits of chip-dirt and rotten wood, so excellent for all kinds of trees, both for fruit and ornamental, has been overlooked."

"No certain rule will apply well for the distances between apple trees. The *Bough* would do well on a square rod or 160 to the acre, while of "*the* 18 *ounce apple*,"† more dwarfish still, more than 200 might grow on an acre. On the contrary, the *Spitzenburg* ought to stand on four square rods, and the *Swaar* on half that space. Again, the Seckel pear, and all cut-leaved peach trees, are dwarfs. 'Mere varieties [often] differ greatly in in size.'" But it becomes necessary to adopt some uniform distance in planting common orchards, and in the former article, the *average* was taken. The instances just mentioned are unusual variations, and in very large orchards for commercial purposes, it might be well to vary the distances of the rows, without changing the distances *in* them, for the several sizes.

"Does the curculio '*rarely*' though '*frequently*' attack the earlier peaches?" The writer stated in No. 1, that "it rarely touches other than smooth *stone* fruit;" and that "the earlier peaches frequently suffer from its attack." The White and Red Nutmeg were chiefly alluded to, which are *rare* in comparison with the rest of varieties. They are also comparatively smooth, nearly as much so as the apricot, which, though not possessing the glossy surface of the plum and nectarine, is so clear of down as to invite freely the attacks of this insect. "No notice is given of catching it on sheets; and yet without this method, I could not hope for apricots in a fruit garden as large as mine. Last spring we destroyed [by this means] more than 1,600, and more than this number two years before." It is done as follows:—Sheets are spread under the tree, which is jarred violently; the insects immediately drop on the white surface, where they are seen at a glance, and destroyed by the thumb and finger. The best time for the work is the cool of the morning. If commenced early enough in the season and continued every morning for a few weeks, this mode proves very effectual. Twice or three times a day would doubtless be better. The blow of a mallet on the stump of a sawed limb, is the best mode of jarring the tree. A few minutes time is sufficient for many trees, if a few boys are at hand to carry and spread the sheets.

"The *pail of water* should be applied [in transplanting] by throwing on about two or three quarts at a time, though *dashing* would be a better word."

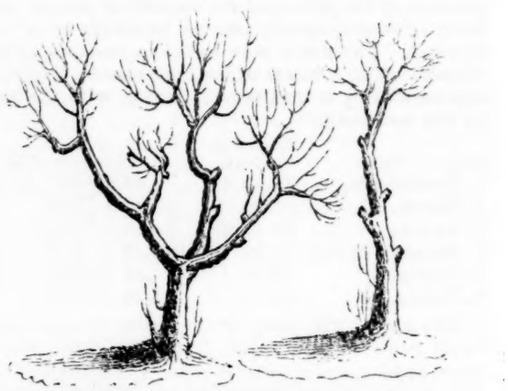
"Transplanting in autumn should be confined to dry soils, or such as are so loose that water will not stand in the holes during winter. In clay, trees should not be set in autumn."

"To guard against *mice*, raise a small mound of earth one foot high round the tree. This method has never failed with me, and has proved of no injury."

The preceding remarks are given with the hope that they may prove of value to others, to whom objections similar to those just quoted, may have occurred.

* In this he acknowledges himself inferior in shrewdness to the man from Limerick, who, writing home, stated he had *meat* in America twice a week: "But," said his companion, "you have it every day." "Aye," replied he, "but do you think I'm such a fool as to tell them what they will never believe!"

† A large striped apple, commonly known as the "*Twenty ounce apple*."



PRUNING ORCHARDS.—Fig. 39.

In the remarks on the Apple, in the last number of this paper, a very common error in pruning old trees, was not noticed. It consists in trimming up the branches to a height of ten or fifteen feet from the ground; which, without much benefiting the growth of the tree, renders their appearance extremely unsightly, and precludes the possibility of gathering the fruit without great difficulty. Fig. 39, represents two specimens of this bad pruning; which are not worse in appearance, than hundreds found all over the country.

Figure 40.

Fig. 40, shows how they should be trimmed, to cause a fine, new, thrifty head, not so high as to be above easy reach, nor so low as to prevent the cultivation of the land. In heading down all large trees of this kind, it will be obvious that the large wounds need a covering; the best of which is a mixture of tar and brick-dust, applied hot to the fresh surface.

The trees are represented leafless, in order to show them more clearly. J. J. T.

CULTIVATION OF FRUIT.—No. IV.

THE CHERRY.

Cherry stocks, in common with those of other fruit trees, are best when raised from seed; and for this purpose the stones should be dried moderately in the shade and then buried in earth, or else buried as soon as taken from the pulp. If they become much dried, vegetation will always be retarded a year, and generally wholly prevented. The mazzard or heart varieties are preferable for stocks on account of their straight and rapid growth. They are grafted standard height, when the round fruited varieties are inserted into them, as in such case they furnish better shaped trees. When budded standard height, the first shoot of the bud should be cut down to three or four inches, to form a better head.

Great difficulty is sometimes found in successfully grafting the cherry. It should be performed very early

in spring, before the buds have started in the least degree. *Budding* has also been found difficult. This can be successfully practiced only on thrifty stocks during their most vigorous state of growth, which is usually in the early part of summer; the delay of a few weeks will often prevent entirely the adhesion of the bud.

The cultivated varieties of the cherry are divided into two classes; the *first*, consisting of the Mazzards, Hearts, and Bigarreaus, is characterized by tallness, and well shaped and pyramidal form; by light green leaves, large and vigorous young branches, and a sweet, or bitter, but not sour taste. The *second class*, includes the Dukes, Morelloes, and common sour or pie cherry, and has small, irregular and compact branches of low spreading growth, dark green leaves, and strongly acid fruit. A little observation will enable any one readily to distinguish these two kinds, even when the trees are not more than a foot in height.

The following are among some of the best varieties:

I. Heart-shaped Fruit.

May Bigarreau.—This is probably the earliest variety of value. It ripens in the early part of sixth month (June,) sometimes earlier, and is not later than the Early May. It is of good size, oblong, heart-shaped, dark red, and of good, but not high flavor. It is an abundant bearer, and is liable to crack from moisture.

Black Tartarian.—A fruit of large size and uncommon excellence, and by some, considered superior to all others. The fruit is sometimes more than an inch in diameter. But when crowded, it is smaller, and is then liable to rot on the tree.

The *Black Corone* is smaller than the Black Tartarian, a great bearer, and of fine flavor. It is not uncommon in various parts of New-York, and is occasionally known under the erroneous names of Ox-heart, Albany cherry, &c.

White Tartarian.—The fruit is of medium size, and of most excellent flavor, even superior in quality to the preceding variety. It is also a great bearer. Two varieties by this name, are described in some books, both of which appear to be distinct, and inferior to this, which is cultivated by the writer.

The *Elton* is a fruit of uncommon excellence. It is thus spoken of in the London Pomological Magazine:—"This invaluable variety was raised in 1806, from the seed of the Graffion which had been fecundated by the the pollen of the White Heart. Its merits can scarcely be too highly spoken of. In flavor it is considered by many as the most delicious of cherries; in beauty it is scarcely surpassed by any other; and its hardiness and productiveness are now ascertained by the experience of all who have cultivated it." A few years' cultivation in western New-York, fully corroborates the high character above given.

The *Transparent Guigne* is one of the best of later cherries. The tree is of very vigorous growth, and yields abundant and regular crops; the fruit is of medium size, and when *fully ripe*, is of a very high and excellent flavor.

The Graffion, Yellow Spanish, or White Bigarreau, is remarkable for the vigorous growth of the young trees, and for the large size, beauty and excellence of the fruit. It is more spreading in growth than most heart trees.

A new variety from England, named *Knight's Early Black*, resembles the Black Tartarian, but possesses the rare merit of ripening more than a week before it. It has scarcely been proved in this country; but should it be well adapted to our climate, it will doubtless be found a most valuable acquisition to our list of fruits.

The *Black Mazzard* is the natural species whence all the cultivated varieties of the heart-shaped cherries have sprung; the fruit is very small, black and of bitter flavor, and is therefore only to be cultivated for stocks.

2. Fruit Round.

Early May.—The growth of this tree is very slow, and the fruit is small, and not high flavored. Its only merit is that of ripening before any other sour variety. In favorable seasons, it arrives at maturity in western New-York, in the latter part of the fifth month (May.)

Early Richmond.—This fruit ripens about the time of the Black Tartarian, (the early part of sixth month,) and when well matured, is a little above medium size, and is tender, rich, and juicy. It is rather too acid when first ripe to be pleasant to the taste, but is fine for cooking; it becomes delicious when it continues on the tree a few weeks longer.

May Duke.—Much confusion has prevailed in relation to this variety. This is probably owing in part to the cultivation of some inferior sub-varieties, but chiefly to the fact of its great variation in time of ripening. On some trees the fruit is ripe, while on others it remains green, and this difference is often seen on different limbs of the same tree. Hence the absurdity of the usual practice of writers on fruit dating the maturity of other varieties from that of the May Duke. The period continues from the ripening of the Black Tartarian, through several following weeks. It is a fruit of great excellence and richness of flavor, but is usually gathered when it has attained only two-thirds of its size, and before its flavor is half perfected.

The *Carnation* is a large, fine, and handsome fruit, ripening about a month later than the Black Tartarian.

The *Belle de Choisey* much resembles the Carnation in external appearance, but is earlier, of more delicate texture, and of sweeter and finer flavor.

Excellent outline figures of a part of the preceding varieties were published in No. 9 of last volume of the Cultivator, by A. J. Downing.

In most parts of this state, the cultivation of good varieties of the cherry has been perhaps more neglected than any other kind of fruit; many who have made considerable effort, to procure good orchards, seem never even to have seen any better than the black mazzard and Kentish red. And those who have better varities, rarely ever witness their good qualities, from the very general practice of picking them before maturity. Cherries not unfrequently attain the *appearance* of ripeness, when scarcely more than half size, while little of their excellence is yet to be perceived.

The cherry, to succeed well, should grow upon a dry, light, rich soil. It rarely succeeds well in a moist situation, and frequently dwindles and dies in a few years. Pruning is but very little practiced, and is generally not needed. English writers mention cases, however, where old stunted trees have been greatly benefitted by pruning, ank speak of the absolute necessity, where it is resorted to, of protecting the wounds thus made from air and moisture by an application of a suitable composition.*

The diseases and enemies to which the cherry is subject, in New-York, are few and not formidable. The tree is therefore one of remarkably safe and easy culture, after it has been procured. There are some varieties, however, which are attacked by an insect which causes large black excrescences upon the trees. Whenever these appear, the injured branches should be cut off immediately and committed to the fire. Perhaps the greatest difficulty in the cultivation of this fruit, is the depredation of birds, especially of the small, brown crested bird, called the *Cedar Bird*. The only effectual remedy yet found, appears to be powder and shot. The birds soon become suspicious and fearful, and less destructive. Small trees of valuable fruit, might be protected by a coarse cheap net thrown over them. Some of the round varieties are stung in the fruit by the Curculio.

J. J. T.

EARLY POTATOES.

Last spring, the following experiment was made with early potatoes: One row across the garden was planted as soon as the ground was open, with seed which had been kept in a warm cellar, and had become sprouted about two inches long. Care was taken not to break or injure these shoots. Another row beside this was planted at the same time with seed which had not sprouted. The former were up nearly two weeks earlier than the latter, and were from four to six inches above ground when the unsprouted ones appeared at the surface. They maintained the same superiority through the season. J. J. T

* For this, see a former number of this series of articles, on Pruning.

CULTURE OF THE GRAPE.

In our February number, we spoke of Dr. "Underwood's" vineyards at Croton Point, Westchester county, N. Y. We should have said Dr. UNDERHILL.

We are happy to lay before our readers the following communication from Dr. Underhill:

MESSRS. EDITORS—I have occasionally written some articles for the Cultivator on the culture of the grape, but as some time has elapsed since you last heard from me, you may have supposed I was taking a Rip Van Winkle sleep, and that you would rouse me by putting another in possession of my vineyards. If these were your views, I assure you you are mistaken. I require no process of this kind to keep up a lively interest in the culture of the grape, though my engagements may prevent my communicating with the *barometer* of the agricultural and horticultural progress of this country, as often as I could wish.

The advantages that would be derived not only in an individual, but a national point of view, from a greatly increased culture of all our choice fruits, is not fully appreciated. The large quantity of animal food consumed by all classes in this country, renders the antiseptic and diluent properties of fruits in temperate and tropical climates, absolutely necessary to the promotion and preservation of health. The alarming increase of diseases of the heart, apoplexy, palsy, obstructions of the liver, lungs, and other vital organs, and the rapid progress and violence of the inflammations consequent upon these obstructions, are directly or indirectly connected with and dependent upon a plethoric or overloaded condition of the blood vessels; a state of the system, which a free use of ripe fruits and vegetables is best calculated to prevent and correct. The object to be obtained in this case, is too manifest and striking to require any enforcement from argument. Physicians, however they may differ in opinion on some subjects, agree on this, that the free use of good ripe fruits, such as the grape, the apple, peach, &c. &c., is well calculated to promote and preserve a healthy state of the human system. We have therefore not only pecuniary inducements to cover our fields and the banks of our rivers with the choicest fruits, to delight the eye and gratify the taste, but a far higher object, the promotion of the health and happiness of our fellow creatures.

Notwithstanding all the efforts that have been made for a number of years past, to advance the culture of the grape and some other fruits, (and the success has been very encouraging,) there does not appear to be any probability of overstocking the markets of the large cities on the seaboard, for a quarter of a century to come. Indeed, if still greater efforts are not made, and far more land employed than has been for these purposes for many years past, the growth of the cities will be greater than the growth of the fruit; added to which, rail-roads and steam have opened many new markets, and will continue to do so for years to come.

The farmers in the interior and to the west, owing to their cheap alluvial soils, find it to their interest to supply us with large quantities of grain and less perishable articles than fruits; and the owners of far more costly land near our large cities and rail-roads, would find it greatly to their advantage to turn their attention more to the productions of the garden, the vineyard and the orchard, than they have heretofore done. The grape, from its arriving at the bearing state so soon, and continuing to produce a bountiful crop every year when well cultivated, for an almost indefinite period of time, possesses advantages over every other fruit with which I am acquainted; and hence, of late I have given it a decided preference on my place at Croton Point. As fast as my peach orchards fail or show symptoms of decay, if the ground is suitable, I occupy it with the grape. A bank well covered with good plants of the Isabella grape, properly and carefully cultivated, will, I am fully persuaded, give larger and more certain dividends, in proportion to the amount of capital invested, than any other bank in the State. Then the enjoyment which the management of a vineyard will afford, the general reader may have formed some idea of from the perusal of the pages of sacred and profane history, but can never fully realize till, while cutting the tender shoots with his own hand, he inhales the delightful perfume of the delicate blossom of the vine; and when at the wane of the season, he clips the large, well filled clusters from the branches, enrapturing the eye, the taste, and the smell, then it is that he can comprehend the reason why the grape has been made the theme of the poet, philosopher and divine, in every age of the world. Yours truly, R. T. UNDERHILL.

New-York, Feb. 17, 1844.

CHANGE OF FRUITS.

"I beg leave to state the result of an experiment made by myself, in order specially to test the correctness of this idea, (that the flowers of one tree are impregnated by the pollen of others, thereby producing all manner of fruit; but when a tree is isolated so that no such union takes place, the fruit will resemble the original. See Cult. vol. 10, page 87.) Some fourteen years ago, when about to emigrate from western Pennsylvania to this place, I procured some seeds from an apple-tree on my father's farm, which stood entirely apart from other fruit trees, and about 60 rods from the orchard. As the produce of these seeds, in due time, I planted in my orchard three trees, which have bore apples for several years past, and we find the fruit of each differing entirely, one from another, in size, color, taste, and time of ripening, and none of them have any resemblance to that of the parent tree.

I am unable to reconcile these *facts* with the view of your correspondent, in any other way than by supposing that the pollen from the trees in the orchard, had blown to the tree from which I obtained the seeds. Has the opinion in question ever been confirmed by actual experiment, or is it founded on theory alone?

Knox Co., Ohio. J. CRAWFORD."

We believe the theory in question, originated with Mr. Knight of England, who made a vast number of experiments, to determine this and other uncertain points in vegetable physiology. Supposing the pollen that impregnated the blossoms, to be in a great degree distributed by bees or other insects, he covered some bunches of of apple blossoms with fine muslin, so that they must have been fertilized by the natural process, and these seeds produced fruit like the original tree, or with little difference. Other bunches he covered in a similar manner, and carefully opening the flowers, removed all the anthers before the process of impregnation commenced. At the proper time, the pollen from other flowers was sprinkled over the pistils of the secluded blossoms, and the seeds from these, produced undoubted hybrids, the result of a cross-fertilization.

Since the labors of Van Mons, Duquesne, &c. have been made known, a different theory has become very prevalent, which is, "that wild plants or fruits, while growing in their native wilds, are generally perpetuated from generation to generation without change; but this is not the case with the *hybrids* or *cultivated* varieties, however isolated, or far removed the tree may be which produces the seeds, from any other of its species." This theory supposes that all the improved or cultivated fruits are hybrids, and that there is in them a constant tendency to show more or less of the different varieties from which in the course of years, they have originated. On this theory, seeds from an isolated tree, would furnish no guarantee that the fruit would be like the parent. The student of nature will not fail to see in this theory a close analogy to facts known to exist in the hybridism or changes of character in animals; and our correspondent will see that the question is one which must be considered open to further investigation.

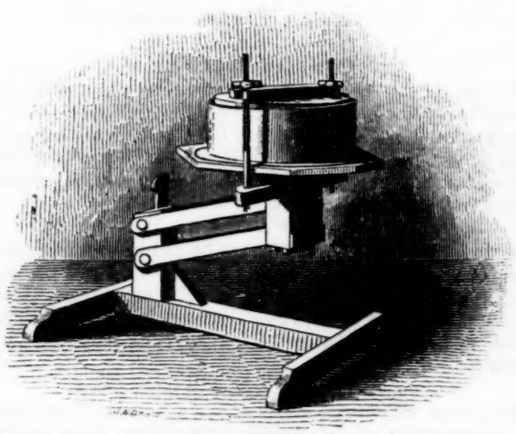
FRUIT TREES.

The New-York True Sun says an orchard of only four acres in Mannington, N. J., produced last year,

360 bushels of apples, at 50 cts.....	$180 00
30 barrels of cider at $1,50.....	45 00
	$225 00

The same man had 12 acres of corn—product, 600 bushels, at 37½ cts., $225. So that 4 acres of orcharding yield as much income as 12 acres of corn.

Domestic Economy.



SELF-ACTING CHEESE-PRESS.—(Fig. 41.)

In vol. 9, page 167 of the Cultivator, we gave a description of this press, (fig. 41.) At that time it had not been generally used; but since then, experience has fully tested its superiority. We placed one, which had been sent us, in the hands of Messrs. H. P. & G. Allen, of Duanesburgh, well known as extensive manufacturers of cheese, and after giving it a thorough trial, they have forwarded us the following certificate.

MESSRS. EDITORS—We have had one of Messrs. COLLINS & STONE'S Patent Cheese-Presses in use the past season, and consider it much superior to any thing of the kind we have before seen, and think the properties of this press need only to be known, to bring it into general use. H. P. & G. ALLEN.

Duanesburgh, Feb. 1844.

N. B. Mr. L. KENNEDY, Jr. of Hartford, Ct., is general agent for this press.

CHEESE MAKING.

Our Canadian correspondent, "*Enquirer*," says—"If it would not be trespassing too much on your indulgence, I would solicit an article on the best method of making cheese, either from your own experience, or that of some experienced cheese maker. I do not recollect meeting with any thing of the kind in your publication for this year, (1843,) or at any rate, nothing sufficiently explicit to enable a beginner to count upon success. The best method of reserving the oily particles to the cheese, and at the same time expressing the whey well, is not well understood in this country. There appears to be variant opinions with regard to the method of separating the whey from the curd, also of the proper way and time of salting it. It has been observed to me that the Americans incorporate a little lard with their cheese, thereby imparting the mellowness so much desired in that article."

If Enquirer will turn to the 147th page of the Cultivator for 1843, he will find the concluding part of one of the best papers on the subject of the dairy or cheese making, yet published in this country; but as the present volume will pass into many new hands, we shall give an article which we hope will meet the wishes of our correspondent and others.

Having had considerable experience in the dairy business, we have found that there are so many things to be taken into consideration, that all rules for their management must be more or less general; and no directions, however minute, can compensate for experience. In large dairies, curds are turned, or cheeses made, at both morning and night; in smaller ones, the night's milk is set, and the cheese made in the morning; in still smaller ones, the milk of two or three days is required to make a cheese, and of course different methods must be adopted in each case. We shall suppose the quantity of milk given at two milkings, to make a cheese of some 30 or 40 lbs. weight, a medium perhaps of our dairies.

In making the rennet, the dried stomach of a calf is the best material; it should be cut in small pieces, soaked in water or sweet whey, to which must be added salt enough to keep it sweet; and at the pleasure of the maker, sage, summer savory, or other aromatic herbs. If the rennet is properly made, a gill will be sufficient for a cheese of 20 lbs.; but its strength can only be ascertained by experiment. If too much is used, the cheese will be puffy and strong; if not enough, the curd will not be formed, and a waste of milk will ensue.

In hot weather it will be found necessary to reduce the temperature of the milk drawn at night, to 50 to 55 deg. of the thermometer, which is best done by placing the pans or vessels in cold water. In the morning, the cream must be carefully skimmed off and put in a pan. As the milk when set, should be of the temperature of 90 to 95 deg., the quantity of milk to be warmed, will depend on the external air; as in a cool day, the milk of the morning will be lower than in a warm day, and a too low temperature must be guarded against. Into this milk while warming, the cream taken off, must be put, and raised to such a temperature that when it is united in the tub with the remainder, and with the morning's milk, the temperature may be about 90 deg. Sometimes it is necessary to warm the whole night's milk; but this is only in very cold weather; while when the weather is warm, the cream may be put in the strainer and melted by pouring the warm morning's milk over it. The thermometer in these cases, must, however, be the guide; and the operations of the dairy cannot well be conducted without this instrument.

When the proper warmth has been given to the milk, and the cream fully incorporated, the rennet is to be added, and thoroughly stirred into the mass. The time allowed for coagulation will depend on the strength of the rennet; and if good, an hour will be about the proper time; during which, more or less of the cream will naturally rise to the surface. When properly coagulated, the curd will bear a slight pressure on its surface without breaking; but experience here is much the best guide. To prevent the escape of what cream may rise with the whey, it should be carefully skimmed to one side of the tub, and covered with some of the coagulated milk laid upon it with a skimmer. The whole is then carefully broken up with a cutter like a long wooden knife. Much is depending on this operation, as if not well done, the butyraceous matter which gives character and excellence to the cheese, will be carried off by the whey and lost. A coarse strainer or cloth, is best thrown over the curd, through which the whey is dipped as it rises, as long as it can be dipped conveniently. The curd is then again broken up, and the whey more completely dipped off than before. Some of the first whey is to be heat as soon as dipped off, for the purpose of scalding the curd. Great care must be taken not to scald the curd too much. Two pailsful at 130 deg. will scald a curd of 20 lbs.; but the weather and the quantity of curd must be consulted to determine correctly. When the hot whey is poured on, the curd should be broken up and mixed by hand, that all parts may be equally treated, and made as fine as it can be broken. It is now removed to a strainer and basket, and when the curd is drained, it is returned to the tub for salting. Half an ounce of good salt to a pound of cheese, will prove a good rule, but the taste of the dairy woman is perhaps as good a regulator of this matter as any. The salt must be pure and fine, and thoroughly mixed with the curd, or it will not ripen equally, and the unsalted places will acquire a bad flavor.

The pressure required, mainly depends on the size. The curd is put into the hoop or vat in a strainer, and remains in the press about two hours. It is then removed, placed in a dry cloth, and returned to the press. It should not remain in the press without turning, longer than five or six hours at a time, and from 24 to 36 hours will be necessary to complete the operation. A power of from 80 to 100 pounds for every 15 pounds of cheese, will be a sufficient pressure. Where large cheeses are made, it has become a common practice to pass a bandage made of thin cotton cloth, of the same width as the thickness of the cheese, around them, and secure it by stitching it together at the extremities. This will pre-

vent the spreading of the cheese, and thus prevent the danger of cracking and of loss from that source. We have found such strips of cotton of the greatest use; and the larger and richer the cheese, the greater their value to the dairyman. Milk may be tinged so as to give a richer hue to the cheese; but if the cream is all added, and the cheese well made, coloring matter will be unnecessary. Annatto is the best coloring material, as it is harmless; which cannot be said of all the ingredients sometimes used for this purpose. There should be a free ventilation to the cheese room, but they should not be exposed to strong currents of air, as it makes them liable to cracking. Cheese should be turned on the shelves daily, and rubbed with butter made into an oil, at each turning.

We have never known an instance where lard has been used in any way in the making of cheese, unless perhaps sometimes as a substitute for butter at turning the cheeses during the process of curing, and we think it would scarcely produce the effect attributed to it by our correspondent, even were it adopted in the place of cream, at the time of making. In our next, we will give the mode of making the celebrated Gloucester cheese.

CREAM CHEESE.

Mrs. Reynolds, of Connecticut, desires to be informed of the mode of making cream cheese, mentioned in Mr. Sotham's communication in the January number of the Cultivator. In reply to her inquiry, we are pleased to give the following communication from Mrs. Sheldrick, under whose superintendence the cheese spoken of by Mr. Sotham was made.

MESSRS. EDITORS—According to your request, I herewith send you a recipe for making cream cheese; and if any of your numerous readers can learn any thing from my experience, I shall feel most happy in communicating what I well know to be worthy the trial of all good house-wives.

Recipe.—Take one quart of very rich cream, a little soured, put it in a linen cloth and tie it as close to the cream as you can. Then hang it up to drain for two days—take it down, and carefully turn it into a clean cloth, and hang it up for two more days—then take it down, and having put a piece of linen on a deep soup-plate, turn your cheese upon it. Cover it over with your linen; keep turning it every day on to a clean plate and clean cloth until it is ripe; which will be in about ten days or a fortnight, or may be longer, as it depends on the heat of the weather. Sprinkle a little salt on the outside, when you turn them. If it is wanted to ripen quick, keep it covered with mint, or nettle leaves. The size made from a quart of cream is most convenient, but if wished larger, they can be made so.

ARABELLA SHELDRICK.

Hereford Hall, March 8, 1844.

MINCE PIES WITHOUT WINE OR SPIRITS.

DOROTHY DUMPLING, gives in the Southern Planter, her mode of making mince pies without wine or brandy. She says the best judges say, (and *behind her back, too!*) that her pies are as good as they ever tasted.

Take 4 pounds of plums, (raisins?) 1 pound of currants, 2 of cherries, 3 of beef suet, 4 of sugar, a fresh beeves' tongue, half a pound of citron, 1 ounce of mace, half an ounce of cloves, 1 nutmeg, the juice of 2 lemons, with vinegar to your taste. Make mince-meat of these materials, and put it by for use. When you make pies, add syrup, or juice of sweet apples, to make the mince-meat liquid, and some fresh apples chopped fine.

In place of citron, marmalade or preserves, will do.

OKRA—"GUMBO."

T. Affleck, Esq., gives the following mode of preparing this vegetable:—"A large mess of okra soup (called gumbo,) should be served on every plantation at least four days in the week, while the vegetable is in season. The pods are gathered while tender enough to be cut by the thumb nail; cut into thin slices, and with tomatoes, pepper, &c., added to the rations of meat, forms a rich, mucillaginous soup. It is planted (in Mississippi) about the first of March, in drills four feet apart, every two or three feet, if the ground is rich, which it should be."

Veterinary Department.

SCOURS IN CALVES.

Lovett Peters, Esq., in a communication in the N. E Farmer, says he has tried most of the remedies recommended for this disease, but has found the following succeed better than any other. "It is a half a pint of cider, and as much blood, taken from the calve's neck; shook well together and given him with a bottle."

BLIND TEETH.

John Johnston of Geneva, says he has had much experience with blind teeth. He states that when they come out in such a way that the grinders of the under jaw press on them, the eyes are always injuriously affected. The blind teeth should always be taken out as soon as they make their appearance.

WARTS ON THE TEATS OF COWS.

Cows are sometimes troublesome about being milked, in consequence of their teats being sore from warts. The Mass. Ploughman recommends rubbing the teats with the juice of *milk-weed*, and also the application of a poultice made of grated carrot. Both may be good; at any rate they will do no hurt, but the best plan to obviate this trouble is, to cut off the warts with sharp scissors, *when the cows are dry*. Not much blood will flow, and the teats will heal in a few days.

PROGRESS OF THE SILK BUSINESS.

Mr. J. R. Barbour, of Oxford, Mass., has lately returned from a tour of observation in regard to the silk business. In the Boston Cultivator, is an interesting communication from him, giving valuable information relating to this important branch of industry.

Mr. B. states that "there has been a large increase in the manufacture of silk in New-England within the last two years. Several new establishments have been started in that time, and old ones that were prostrated by the mulberry speculation of 1839, have been resuscitated and are now going on prosperously." He speaks of a large establishment just going into operation in Willington, Conn., for the manufacture of cords, gimps, and other trimmings. The building is over 100 feet long and three stories high. Messrs. Dale & Denmead are the owners, and they contemplate doing a large business.

Mr. B. also speaks of the establishment of Messrs. Murray & Ryle, at Paterson, N. J., which consumes 150 lbs. of raw silk weekly—also of that of Mrs. McLanahan, Philadelphia, commenced in 1841.

Mr. B. visited the two principal silk establishments west of the mountains, viz: that of Mr. Rapp, at Economy, Pa., and Mr. Gill, at Mt. Pleasant, Ohio. He pronounces the goods of these establishments, equal to any of the same kind brought from England or France. He found Mr. Gill building a new factory 50 by 20 feet, and three stories high, for weaving plain pongees for printing. He could hear of no establishment at the west that had failed or had been suspended; though many of them have suffered much from the want of more capital.

Mr. B. says the valley of the Ohio has gone ahead of New-England in the production of raw silk. He thinks the west and south will take the lead in the growth of silk, just as they do in corn and other agricultural products, and for the same general reasons and no others. The proper question, then, he says, for eastern farmers, is, not whether the west can lead them in this crop, but whether silk is not one of the best crops they can raise. Indian corn is one of the best crops for the eastern farmer, though it will be admitted that the west can take the lead in this article. Mr. B. says, "I reason about silk in the same way. Here we are, fixed upon our hills and plains. Some of us would not abandon them for the fertile west if we could. Here we are, and here we must be, and we must do something. We are on a tread-mill, and it is work or die; and the only question is, what articles of cultivation are most worthy of attention? Sooner or later my readers will decide in favor of silk, as one of the class."

PROUTY & MEAR'S PATENT CENTRE-DRAUGHT SELF-SHARPENING PLOWS,

FITTED up with new gear complete of six different sizes. Also, *Prouty & Mear's Sub-soil Plows*, of three sizes, viz: No 1, for one horse, $8; No. 2, for two horses, $10; No. 3, for three or four horses, $12. For sale wholesale and retail, by

D. O. PROUTY,

Seed and Implement Warehouse, No. 176 Market-st.

Philadelphia, March 18, 1844.—2m.

ALBANY SEED STORE AND AGRICULTURAL WARE-HOUSE—No. 38, BROADWAY.

THE proprietor is now receiving from his seed growers, a full and complete assortment of American Garden Seeds, all of which are selected with care, being grown from the best varieties of vegetables to be found in the country; also European Seeds, Plants and Flower Seeds from the best establishments in Europe and America.

Fruit Trees of all the choicest kinds furnished to order at the lowest market prices, and warranted true as represented. Agricultural and Horticultural Implements of American and European manufacture. Also, the New England Ploughs, Cultivator Ploughs, Root Slicers, Corn-Shellers, Straw-Cutters, &c. Those who wish to purchase or examine are respectfully invited to call Albany, March 15.—2t. W. THORBURN, Seedsman.

ROCHESTER (N. Y.) NURSERY.

THE subscriber offers for sale a choice collection of Fruit and Ornamental Trees. His Nursery contains many choice varieties of fruit trees which have been selected with scrupulous regard to their good qualities; thus affording a collection worthy the attention of the connoisseur or utilitarian. Distant orders will be carefully packed with straw in mats or boxes. Persons desirous of having a succession of fruit, and not being familiar with the kinds, may, by leaving it to the discretion of the proprietor, depend upon having those sorts which are most desirable. S. MOULSON,

Rochester, April 1, 1844. 36 Front-st., Rochester.

FIELD SEED STORE.

THE subscriber continues to keep constantly on hand at his long established Seed Store, a supply of the best quality and kinds of Field Seeds, viz:

Red Clover, of the large and small growth,
Timothy, Red Top, or *Herd's Grass, Orchard Grass,*
Lucerne, or *French Clover, White Clover,*
Trefoil, Kentucky Blue Grass, &c. &c.

Also, the different varieties of Wheat, as White Flint, Red Chaff, Mediterranean, and English—for sale in lots to suit purchasers at moderate prices, by ISRAEL RUSSELL,

Feb. 1, 1844.—mar. oct. 26 Front-street, New-York

N. B. The following description of some superior English Wheat sown in the month of October last, the product of which will be for sale at the above Store, is given by a respectable English farmer in the State of New-Jersey, who sowed about eleven bushels, a sample of which can yet be seen. "It is called the Uxbridge White Wheat, and is the most noted Wheat they have in England, it being of fine quality, always commands a high price, as the flour is used by the biscuit bakers in London; it is great for yielding, and puts out a much larger ear than any wheat I have seen in this country. I saw when in England, three years ago, on my brother's farm in one field, 120 acres, that yielded 40 bushels and upwards to the acre. It grows very strong, and is not liable to be laid by heavy rains. I will warrant it free from any soil whatever. I did not see in the eleven bushels, a particle but Wheat; and I have sown it on Clover seed, on purpose that there shall be nothing but Wheat; and I will put nothing in the barn with it, so as to put it beyond the possibility of a doubt of its having any thing in it or getting mixed with other Wheat, which through carelessness is often the case. I have grown a great deal of it myself in England, and know from experience that for yield and quality, there is no Wheat to compete with it. Its general weight is from 64 to 67 lbs. per bushel. It is smooth chaff, and easy to thrash, which is not always the case with smooth chaff Wheat."

BAILEY & RICH'S SMUT MACHINE.

MANUFACTURED and for sale by J. T. E. & C. RICH, Shoreham, Vt. Patented in 1841, much improved in 1843.

These Machines are made wholly of iron and steel, very compact, efficient, simple in construction, and durable. They are so made, that a strong current of air is forced into the centre of the machine, and passing out sideways through cracks in the inner and outer cylinders, expels the dust as fast as created, and prevents it from mingling again with the grain, as it does in other mills, so as to often blacken the kernels.

They will clean from 15 to 25 bushels per hour. Warranted to suit upon 3 months trial. Shoreham, Feb 16, 1844.—2t

CAMBRIDGE NURSERIES,

CAMBRIDGE, MASS., TWO MILES FROM BOSTON.

HOVEY & CO, Proprietors of these extensive Nursuries, would respectfully inform their friends and the public generally, that they have now ready for sale, an unrivalled collection of

Fruit and Ornamental Trees,
Evergreen and Flowering Shrubs,
Grape Vines, Raspberries, &c.
An extensive collection of hardy and tender Roses,
Green-house and hardy Herbaceous Plants,
Dahlias and Bulbous Roots,
Hawthorn and Buckthorn, for Hedges,
Apple, Pear, Plum, Cherry, and other Stocks.

This collection of fruit trees embraces all the best kinds; selections of which were made from the best nurseries in England and France, and scions procured from the well known Pomologist, the late R. Manning, of Salem.

The selection of Chinese, Tea, Noisette and Bourbon Roses, includes upwards of 200 varieties, many of them the rarest and choicest to be procured in England. The collection of Dahlias is most extensive, and comprises all the fine varieties in cultivation.

☞ All orders to be accompanied with cash or a draft. Catalogues of fruit trees, roses, Dahlias, vegetable and flower seeds, issued separately, and furnished to all *post-paid* applicants. Trees, plants, seeds, &c. packed so as to be safely transported to any part of the Union.

Address, HOVEY & Co., Seedsmen and Nurserymen,
7, Merchant's Row, Boston, Mass.

AMERICAN FARMER'S ENCYCLOPEDIA AND DICTIONARY OF RURAL AFFAIRS,

WITH 17 beautifully executed plates of Cattle, Agricultural Implements, Destructive Insects, &c., complete in 1 volume, 1150 pages, price $4, bound—embracing all the recent discoveries in Agricultural Chemistry, adapted to the comprehension of unscientific readers, by Cuthbert W. Johnson; enlarged, improved and adapted to the United States, by Governeur Emerson, assisted by numerous scientific gentlemen.

An excellent manual of agriculture—and we venture to say that there is not a farmer in the United States that cannot derive many useful hints and much valuable information from this Encyclopedia—Albany Cultivator.

No farmer or planter who desires to be master of the science of his profession, should be without this work.—American Farmer.

Its merits are far greater than we had before imagined, and we are fully convinced that such an amount of valuable knowledge for farmers can be found in no work in so cheap and convenient a form. In fact, no farmer who pretends to be well informed in his profession should consent to be without it. As a book of reference, it is invaluable—we would not be without it for four times its cost.—New Genesee Farmer.

Should be in the library of every farmer.—American Agriculturist.

We heartily recommend it to our readers, and wish every farmer in North Carolina would take it and study it carefully. Raleigh Star.

A real treasure of practical information wherein the experience of all ages and countries is carefully posted up to the present day, and admirably arranged for convenient reference —Dr. Darlington.

For the farmer who can have but few books, we know of no one relating to his profession so valuable.—Prairie Farmer.

fe 2t CAREY & HART.

POUDRETTE—A NEW ARTICLE.

IMPROVEMENTS of such a nature have been made in the manufacture of POUDRETTE, by the *Lodi Manufacturing Company*, near the City of New-York, as to warrant the opinion that it is the *cheapest and best Manure* now known and in use. By experiments which have been made, it has been proved that its *fructifying powers have been greatly increased, its operation upon vegetable matter quickened.* It will obviate the effects of *severe drought*, and will retain its fertilizing qualities much longer than any Poudrette heretofore made. It will ripen Corn in 66 days fit for use. The price will be reduced the following season as follows: At the Factory it will be sold in bulk at the rate of 25 cents per bushel. It will be delivered at any wharf or place in the City of New-York, *free of cartage and other expense*, at the rate of $2 for one barrel, which contains 4 bushels; $3.50 for 2 barrels; $5 for 3 barrels, and $10,50 for 7 barrels, and at the rate of $1,50 per barrel for any greater quantity. Persons wishing the article will please give notice in due season, as the orders will be fulfilled in the order of time received. The Company was incorporated in February, 1840, for 30 years by the Legislature of New-Jersey. No liability to stockholders beyond their subscription of $100 per share. A *few shares* of what is called the "*Reserved Stock*," remain to be be subscribed for, which the Company guarantee shall pay a dividend of 50 bushels of Poudrette a year on each share, as authorized by the Charter. A pamphlet containing instructions for its use, and all other necessary information, is in preparation, and will be sent *gratis*, to any person applying for it, postpaid. Agents have been or will be appointed in most of the important places in the Northern and Eastern States, to whom persons may give orders. Where there is no agent, please direct to "*The President of the Lodi Manufacturing Company*, No. 43 Liberty-street, New-York," and it shall receive immediate attention. Please refer to the Letter of Mr. Kentish, in the March number of the CULTIVATOR. New-York, Feb. 15, 1844.

FRUIT TREES.

THE subscribers are now ready to receive orders for superior Trees, viz: Apples, Plums, Pears, Cherries, Peaches, &c. &c., from their new nursery. Trees are all warranted in a healthy condition, and true to their sorts. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicited, and will receive prompt attention. WILSON, THORBURN & TELLER.

☞ A liberal discount made to those who purchase to sell again, or by wholesale.

Orders left with WILLIAM THORBURN, Seed and Agricultural Repository, No. 38 Broadway, Albany, will be promptly attended to. *Albany, April* 1, 1844.—2t.

GREAT IMPROVEMENT IN HUSSEY'S CORN AND COB CRUSHER.

IT is believed the Corn and Cob Crusher, invented and manufactured by the subscriber, in Baltimore, for the last two years has taken the lead of all others. Whatever its merits may be, the machine is now pretty well known, and will still be made in its usual form and kept for sale as heretofore.

The chief design of this advertisement is to introduce to the notice of farmers, a cheaper, and in some respects a better article, which has just been completed and proved. It requires much less power, and crushes and grinds much faster than the others.

The price, including extra grinders, is $25; a machine working two sets of grinders is $35; one with three sets, for water power, $45, including extra grinders for each set; all made in a substantial manner and warranted as advertised.

Orders for Hemp Cutters and Reaping Machines should be sent to the subscriber as soon as possible, so that none who design having such machines be disappointed at harvest time.

Baltimore, Md., March 15, 1844.—3t.* OBED HUSSEY.

AMERICAN HOTEL.

ALBANY.

THE subscriber begs leave to announce to his friends, old patrons, and the public in general, that he has taken a lease for a term of years, of the American Hotel, No. 100, State-st., Albany, which he hopes to have in readiness for the reception of company in all the month of May ensuing.

The House will be closed for a time, in order to renovate and put it in complete repair, and will be newly furnished from the garret to the cellar. In the quality and neatness of the beds, cleanliness of the rooms, he is determined not to be excelled by any other House in the city; and if a table, well spread with the substantial viands and luxuries of the season, will be any inducement for patronage, he hopes to claim a share.

In location, the American has many advantages; being situated in the centre, and in one of the most beautiful streets in the city; within a few moments walk of the eastern and western Depots, and the landing of the steamboats; about midway between the Capitol, City Hall, Public Offices, and the Banks, Post-office and business parts of the city.

The subscriber places much reliance on the countenance and support of the *Agriculturists* throughout the Union, who may visit the city, and pledges himself to spare no exertions to render their stay agreeable, should they favor him with their company.

Three Hills Farm will be carried on as usual under his own supervision, by a careful manager; and the breeding and rearing improved stock will be continued as heretofore.

April 1st, 1844.—1t. C. N. BEMENT.

WARREN'S IMPROVED HORSE POWERS AND THRESHING MACHINES.

THE undersigned continue to manufacture these celebrated machines with increased success and satisfaction; having by experience completely adapted them to the intended use of the farmer.

The many letters received from purchasers of these machines the last season, testify most unqualifiedly, that their performance is even better than our recommendations, and prove conclusively that they are not liable to get out of order if properly used; and that the two horse power and thresher, readily threshes in a thorough manner, on an average, from 12 to 15 bushels of wheat, and 25 to 30 of oats or barley per hour, and also that clover seed is threshed with facility.

These machines are simple and compact, and easily carried in a one horse wagon, (as their weight together is only about 600 lbs.) and only requires three persons to attend them, and the price of the Two Horse Power and Thresher is only $75.

The undersigned will also manufacture a superior Four Horse Power and Thresher, this season, of the same principle, to sell for only $100. The Two Horse Power alone is $50. The Four Horse Power will be proportionable as to price, the machines always deliverable in this city for cash.

The threshing machine we usually make is the permanent beater, but if any prefer the spike thresher we can furnish a superior article at the same price. Our beater machine does not break the straw, but so throws it out that it can be readily gathered into bundles, and sold in the market when desired.

The Horse Power is very often purchased to be used in driving saws, small grist mills, cotton gins, &c. and has always answered the purpose desired, to entire satisfaction.

The undersigned take pleasure, therefore, in recommending these machines, as being what the great majority of farmers want and can afford to have. L. BOSTWICK & Co.

1t 146 Front-st New-York City.

TOBACCO SEED.

THE genuine *broad and narrow leaf Tobacco Seed*—the narrow leaf is about two weeks the earliest—for sale at the Seed Store of the Hartford County Agricultural Society, by Hartford, Ct., March 15, 1844.—1t. E. W. BULL, Seedsman.

S. CORNELL'S DISTRICT SCHOOL GLOBE.

A BEAUTIFUL and cheap instrument, 5 inches in diameter, accompanied with a card of lessons illustrating the form of the earth, day and night, inclination of the axis of the earth to its orbit, change of seasons, difference of time in different parts of the earth, and the difference in the length of the day.

Owing to the peculiar construction of this globe, and the accompanying lessons, it is better adapted to elementary illustrations in geography, than any other now in use; and its cheapness renders it admissable to every school. It should be in every school and every family.

Manufactured by Silas Cornell, Rochester, State of N. Y., and retailed at $1,50. A liberal discount allowed to dealers. April 1.—4t.

DURHAM BULLS, DUKE OF WELLINGTON AND METEOR.

AS frequent applications are made by gentlemen at a distance for the use of these animals, to prevent applications by letter this notice is given.

These animals will be let to cows at $10 each; the money in all cases, to be sent with the cows, and paid to the subscriber. Wellington was bred by Thomas Bates, Esq., of England, and out of his prize cow, Oxford, celebrated as a milker. Meteor bred by Mr. Geo. Vail, of Troy, and out of his imported heifer, Duchess, and got by Wellington. Duchess was also bred by Mr. Bates, and got by his celebrated prize bull Duke of Northumberland. These animals are on Mr. Vail's farm, about two miles from Troy, and will be allowed to serve a few cows out of his own herd. Pasture for a short time may be had for cows sent, at the usual prices. Apply to the subscriber on the farm.

April 1, 1844.—3t. A. CLOCKIE.

IMPROVED EAGLE PLOWS,

MANUFACTURED BY

RUGGLES, NOURSE & MASON,

And for sale at the Manufactory in Worcester, Mass., and at their Agricultural Ware-house and Seed Store, Quincy Hall, Boston.

A FULL *investigation* and *trial* of Plows was had in October, 1843, (occupying several days,) by an able committee of the Essex Agricultural Society, when seventeen plows were presented.

The committee in their report say, "In testing the quality of a plow, the *power* by which a plow is moved, the *ease* with which it is handled, and the *manner* in which it completes the work, are prominent points in consideration." And in speaking of the improved Eagle Plow, to which they unanimously awarded the highest premium, they say: "As near as we can ascertain, this plow combines all the good qualities manifested in either of the others with some peculiar to itself," and further, "our attention was particularly called to the *quality* of the castings on the plows of Ruggles & Co., their *finish* and *durability*. Their appearance certainly is more perfect than any thing we have elsewhere seen, the process of *chilling* the *points* the entire *edge* of the *share*, and *flange* or *base* of the *landside*, gives a permanence and durability to the work that renders it of a decidedly superior character," "and we think there is no hazard in saying, that the value of the parts thus made is more than doubled by the process."

At the same society's plowing match held at Andover, Oct. 3d, 1843, where there were *forty-four* competitors, *nine* of the *ten* premiums were awarded to plowmen using plows made by Ruggles, Nourse & Mason. At the plowing matches held in Massachusetts the same year, forty-three premiums were awarded to plowmen using plows made by R. N. & M., *twelve* of which were the highest premiums awarded in the counties of Essex, Middlesex, Worcester, Plymouth and Bristol.

SUB-SOIL PLOWS.

Among their great variety of kinds and sizes of plows, they have several sizes of Sub-soil Plows made in form like a genuine Sub-soil plow imported by them from Scotland. They have been thoroughly tested with great satisfaction as the increasing demand from all sections of the country testifies. The New-York State Agricultural Society in September, 1843, awarded their first premium to the Sub-soil plow made by Ruggles & Co., (presented by B. F. Smith, of Syracuse.) Prices, $6, $8, $10, $12, and $15.

Also, plows particularly adapted to the culture of cotton, rice, tobacco, &c., for the SOUTHERN STATES, of *style* and *quality* equal to those made by them for this section of the country.

At their warehouse may be found the most extensive and complete assortment of Agricultural and Horticultural implements to be found in the United States, embracing every tool used in the cultivation of the farm or garden. Also, a large and well selected assortment of field, grass, garden and flower seeds. All of which are offered at wholesale or retail, at prices which cannot fail to suit the purchaser

April 1, 1844.—1t